For Reference

NOT TO BE TAKEN FROM THIS ROOM

THE UNIVERSITY OF ALBERTA

AN APPRAISAL OF AN ECLECTIC APPROACH TO THE TEACHING

OF GRAMMAR IN THE JUNIOR HIGH SCHOOL

by

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The undersigned certify that they have read, and recommend
to the Faculty of Graduate Studies for acceptance this thesis en-
titled "An Appraisal of an Eclectic Approach to the Teaching of
Grammar in the Junior High School" submitted by Mary Lobay in
partial fulfillment of the requirements for the degree of Master
of Education.

ABSTRACT

The development of modern linguistics has created an awareness that the present school grammar texts should be changed in order to incorporate the new knowledge about language which the linguistic scientists have made available. Some textbooks based on the new grammars are now available. One of these written by Dr. E.W. Buxton, was still in manuscript form when the present study began. In order to determine whether the material in this book can be successfully taught to an average junior high school class by a typical teacher without much linguistic training, the manuscript was used in a Grade VII classroom for a period of forty lessons.

The fundamental questions for the study were whether the manuscript provides for a systematic development of students' understanding of the language; whether it provides for numerous opportunities for students to verbalize facts, generalizations, relationships, and applications; and whether it holds the students' interest.

To determine the answers to these questions the following procedures were used:

a. Anecdotal records were kept of all lessons taught. It was hoped that these records would give some indications of the strengths and weaknesses of the manuscript.

b. An instrument to evaluate the effectiveness of the manuscript was used by the investigator to determine whether the manuscript was suitably designed to assist teachers to use an eclectic approach to grammar in junior high school classes.

c. An observer's instrument was used to indicate the number and type of oral responses that each student made during thirty of forty lessons

taught. These responses, described as either fact or higher mental process responses, were to indicate whether students were developing an understanding of the structure of the language, as well as the possible degree of their understanding of each part of the program.

d. A students' interest questionnaire was given at the end of the investigation to ascertain what the students thought about the suitability of the manuscript.

The findings gave evidence that the manuscript was suitable for junior high school use in that it very effectively satisfied all criteria on the investigator's evaluative instrument. The student responses, which were tabulated from the observer's instrument, indicated that as students gained more understanding of the underlying principles of the language, their answers were more frequently those of the higher mental processes as opposed to statements of facts. On the other hand, responses were more frequently those of the factual type when students were not given enough time to think and to organize; or when they were given completely new material. This latter type of response was dominant only in a few lessons. It can, therefore, be inferred that the manuscript has provided for a systematic development for students' understanding of the language rather than only an accumulation of facts. Moreover, the results indicated that students responded more frequently as they began to gain more insight into the structure of the language. The evidence gained from the responses, particularly in the last ten lessons based primarily on transformational grammar, suggests that the manuscript has provided for numerous concepts which students can verbalize. The statements made by the students in their interest questionnaire suggest that the materials in the manuscript not

only held the students' interest but also changed their attitude towards
grammar. One implication of the above findings is that the effectiveness
of new classroom materials can perhaps best be determined by teaching the
materials to classes representative of those for which the materials are
intended.

The study concludes with suggestions for some possible investiga-
tions which might result in effecting other changes in the teaching of
grammar.

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CHAPTER I

NATURE OF THE STUDY

"To know the language of a people is to know that people. To know one's language is to know one's self. There is no more important study."

- Paul Roberts

I. BACKGROUND

For more than a hundred years school grammar books have been based almost exclusively on the models of eighteenth century grammarians, two of whom were Robert Lowth[1] and Lindley Murray[2]. These traditional grammarians transferred the categories of Latin to English, and in so doing, they accepted rules which were more applicable to Latin than to English. It was assumed that by following these rules students would become good speakers or writers of English.

In the early part of the twentieth century numerous investigations revealed that the knowledge of grammatical rules, which had been so carefully prescribed in the traditional grammar books, had an almost negligible effect on the students' ability to speak and write good English. The results of these investigations were disconcerting; however, they did cause educators to search for more productive approaches to the teaching of grammar.

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[1] Robert Lowth, A Short Introduction to English Grammar, second ed. (London, 1764).

[2] Lindley Murray, English Grammars 9th ed. (London: W. Darton and J. Harvey, 1803).

One of these approaches was functional grammar, which, in attempting to teach only items that were thought to be useful, actually began the teaching of grammar in piecemeal fashion. The Usage Movement which followed only strengthened the fragmental approach to grammar which functional grammar had begun. The content of grammar teaching had diminished considerably.

Meanwhile research into the nature of English begun by European linguists, including Otto Jesperson,[3] revealed many facts about the language that hitherto were not known. The linguists began to make imposing collections of these facts and the first to make a logical analysis of this collected data were Leonard Bloomfield[4] and Edward Sapir[5]. Thus, began the discipline of structural linguistics which describes the language as a structure or a system.

In the light of these new descriptions of the language, structural linguists began pointing out all the inadequacies of traditional grammar. Traditional grammar, they said, was distorted by errors in fact and method. But they did not offer any substitutes for the traditional grammar texts. Their own writings were scholarly descriptions of the English language and were not intended for classroom use.

Even as the new grammar was being consolidated and before the grammarians who had developed the new concepts could come to total agreement about terminology and other points of difference, a new group of

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[3] Otto Jesperson, A Modern English Grammar, (Kobenhavn: Ejnar Munlngaard, 1909).

[4] Leonard Bloomfield, Language, (New York: Holt, Rinehart and Winston, Inc., 1933).

[5] Edward Sapir, Language, (New York: Harcourt, Brace & World, 1921).

linguists appeared. These were the transformationalists, the proponents of the transformational-generative theory of grammar which Noam Chomsky[6] had brought into prominence. Transformationalists, in turn, began criticizing the structural theorists who they felt were describing only the various states of the language while they should be pushing beneath the data and the analysis into the inner workings of the system, the operations of the language. While the debate continued, traditional grammar remained in most of the schools.

I. Grammar Textbooks

While many educators recognize that traditional grammar is an inadequate and inaccurate description of the English language, and that the new grammars offer a more precise content and a more challenging method, few textbooks have been designed for secondary school use, particularly at the junior high school level. Most of those that have been published do not provide the assistance that a typical teacher must have in order to teach the new grammar successfully. Some textbooks also included ingeneous devices as well as innovations intended to make a new grammar more palatable, but some of these devices, including numbers and nonsense syllables often made teachers more skeptical. At the 1964 Session of the Schoolmen's Week at the University of Pennsylvania there was a feeling of pessimism about linguistics as far as school programs and textbooks were concerned, even though prominent educators were personally convinced of the

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[6]Noam Chomsky, Syntactic Structures, ('s-Gravenhage, The Hague: Mouton & Ae, 1957).

value of the linguistic approaches and of their superiority to traditional grammar.[7]

2. Grammar Textbooks in Alberta

In Alberta, dissatisfaction has also been expressed about the program in grammar. The attempts at reform followed the same pattern as in other areas. The present textbooks for the junior high schools Words and Ideas[8] include traditional grammar put in the appendix to be used only as a hand-book for reference. Until September, 1966, the philosophy behind the teaching of grammar was that it should be taught functionally. However, if one could accept the results of an Edmonton Public School Language Survey[9] as indicative of what was happening in Alberta generally, teachers were rejecting both the textbook and functional grammar. Instead, they were teaching traditional grammar from conventional grammar books not authorized by the Department of Education. One can only surmise that teachers felt that they should teach a theory of grammar rather than something called functional grammar.

The work of the structural linguists in the United States was not unnoticed in Alberta. In 1960 a pilot study of a structural grammar textbook, Patterns for Writing[10] was undertaken by several teachers; among them

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[7] R. Donald Cain, "What Do We Mean by Linguistics?" English Journal XIV, (May, 1965), pp. 399-400.

[8] Harold Baker and Charles H. Campbell, Words and Ideas, (Toronto: W.J. Gage and Co. Ltd., 1953).

[9] Edmonton Public School Junior High Language Survey, Unpublished, 1962.

[10] D. Dashwood-Jones, Patterns For Writing, (Toronto: W.J. Gage and Co. Ltd.).

this writer. A report to the Department of Education stated that it was the best book of its kind available in Alberta. There were points of dissatisfaction, however.[11]

One of these points was the number system which the author used. This system had been used by Fries[12] in The Structure of English and later adopted by Paul Roberts[13] in Patterns of English. It was felt that this system was merely a complication, completely unnecessary for the study of grammar. Nevertheless, the Department of Education recommended Patterns For Writing to be used as a secondary reference in 1965 and as a primary textbook in 1966. It also recommended that beginning in 1966 structural grammar be taught in all Alberta schools. Because new developments have occurred in the discipline of grammar since this book appeared, Alberta educators are concerned that new theories of grammar, particularly transformational-generative grammar, will not be made available to Alberta students.

3. Need For New Grammar Textbooks

There is a general awareness among enlightened educators and teachers that students should be made familiar with the best that is known about their language. The question of primary importance is "How can satisfactory

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[11]A report to the Alberta Department of Education, "An Evaluation of Dashwood-Jones' Patterns For Writing," Unpublished, 1961.

[12]Charles Carpenter Fries, The Structure of English: An Introduction to the Construction of English Sentences, (New York: Harcourt, Brace & World, 1952).

[13]Paul Roberts, Patterns of English, (New York: Harcourt, Brace & World, 1956).

textbooks or programs be implemented into the secondary schools so that a change in the teaching of grammar can be effected?" Cain, Assistant Director of Editing and Textbooks for the Philadelphia Public Schools, has noted that scholars should be used for setting up new textbooks or programs, but vested interests, inertia, established positions, and consideration of protected profits have stifled scholarship.[14] Myers of Arizona State College believes that scholars can help solve the problem of textbooks by acting as guides to "help see and hear more accurately."[15]

It seems that the first requirement in implementing new textbooks is to have scholars available who are willing to give their time and attention to preparing new books. Then according to Kitzhaber[16] of the University of Oregon there must be a consideration of how to present a grammar that is an intellectually defensible description of the English language in a way that takes advantage of the best current theories of learning. In the preparation of a book, a writer must keep two questions in mind: Can an average secondary school student learn it? Can a teacher without special training teach it?

These are serious questions which have to be answered before the textbook is offered to a school system. There is no way of knowing the answer except to see what students and teachers can do with a book. This

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[14]Cain, op. cit., p. 404.

[15]L.M. Myers, "Linguistics But Not Quite So Fast," Linguistics Current Issue, National Council of Teachers of English, (October, 1961), p. 29.

[16]Albert R. Kitzhaber, Foreword to Modern English Sentence Structure by Syrell Rogovin (Random House/Singer, 1964).

implies that before being authorized for school use, the book should be taken into a classroom to find out whether it is appropriate. After alterations and revisions, resulting from this kind of experiment, the new material may be worth introducing into a school system. Such a procedure would eliminate the authorization of textbooks which are unsatisfactory to students or teachers.

II. THE PURPOSE OF THE STUDY

Speaking of Language, written by Dr. E.W. Buxton, University of Alberta, is another attempt at a textbook based on linguistic principles. Rather than being limited to one theory of grammar, it incorporates several theories, in particular, structural and transformational-generative grammar. Moreover, much of the terminology of traditional grammar is used. Historical linguistics, semantics, and functional grammar are also included, because the author believes that all of these are aspects of the wide field of linguistics. He seems to have the same philosophy as James Sledd who states:

> The study of English grammar and of the teaching of English will make it necessary for most of us to be able to use grammar of more than one kind.[17]

Speaking of Language is written for junior high school use, particularly for Grades VII and VIII, and has the following objectives:

1. To enable students to learn language facts and develop language concepts.

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[17] James Sledd, "A Plea for Pluralism," Linguistics Current Issue, National Council of Teachers of English, p. 15.

2. To enable students to see how language is built and how it works as a system.

3. To enable students to understand that grammar is a complete structural pattern of a language learned unconsciously by them in their childhood.

4. To enable students to see that grammar is a process which arranges, describes, and illuminates the way people use the language.

5. To enable students to grasp an insight into the nature of the English language.

In writing this textbook the author has taken into consideration that student verbalization effectively develops concept formation;[18] therefore, most of the exercises are to be done orally. Moreover, Buxton has the firm belief that it is necessary for a teacher or teachers to experiment with a new textbook to determine what students can learn about language. The textbook is still in manuscript form so that revisions and changes can be made where necessary.

III. STATEMENT OF THE PROBLEM

The study was to investigate the following questions:

1. How suitable is Speaking of Language for the teaching of grammar in the junior high school?

2. How effectively does Speaking of Language provide for a systematic and logical development of students' understanding of the structure of the

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[18] Robert M. Gagne, Ernest C. Smith, Jr., "A Study of the Effects of Verbalization on Problem Solving," Readings on the Psychology of Cognition, ed. Anderson & Ausubel (Holt, Rinehart and Winston Inc., New York: 1965), pp. 391.

language?

3. How effectively does <u>Speaking</u> <u>of</u> <u>Language</u> provide for student responses so that students can verbalize grammatical facts, generalizations, relationships, and applications?

4. How effectively does <u>Speaking</u> <u>of</u> <u>Language</u> hold the students' interest?

IV. THE PROCEDURE

1. A manuscript was given to each student in a Grade VII classroom and the material was taught by the investigator who attempted an objective appraisal of its effectiveness and applicability.

2. The effectiveness of the manuscript was measured by original instruments which incorporated the best criteria available to the investigator about textbook evaluation and sound educational objectives.

3. An observer recorded the number and kind of responses students made in order to ascertain whether students were understanding the concepts presented.

4. Anecdotal records were kept of each lesson so that the strengths and the weaknesses of the manuscript would be revealed.

5. A personal interest questionnaire was given to each student at the end of the investigation in order to determine how the students felt about the manuscript.

V. LIMITATIONS OF THE STUDY

1. There was no attempt to classify students according to intelligence, achievement, sex, or socio-economic differences.

2. Although other teachers were trying this textbook in other classrooms, this study was limited to one teacher's experiment in one classroom.

3. There was no attempt to compare the performance of the students using the textbook with the performance of students in other classrooms not using the textbook.

VI. DEFINITIONS OF TERMS

1. Grammar

There are numerous definitions of grammar. Hartung[19] has observed that the term grammar was historically defined as both the study and the art of language. During the present century, grammar is often defined as the theory of the properties of the language. As this study is concerned with the traditional and linguistic theoretical systems of language, these terms are defined in the following descriptions.

2. Traditional Grammar

Since the nineteenth century until the present, traditional grammar is most often defined as a set of concepts and distinctions in terms of which all languages should be described. Moreover, it is a set of formal

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[19]Charles V. Hartung, "The Persistence of Tradition in Grammar," Readings in Applied English Linguistics, ed. Harold B. Allen, (New York: Appleton-Century-Crofts, 1964), p. 16.

characteristics and correspondences to which traditionalists feel all languages should conform. As it was considered to be a crystallization of human logic, its most convenient expression was one based on categories of Latin. It is also called prescriptive grammar.

3. Linguistics

Linguistics is an inductive, objective, and systematic study of a language. It is concerned with reportable facts, methods, and principles derived by means of observations, hypotheses, experiments, postulates, and inferences. Its products are descriptive statements about language. There are many areas in the field of linguistics, one of which is the general theory of language. Two groups of linguists have had particular interest in this area. These are the structuralists and the transformationalists.

A. Structural Grammar

Structural linguists defined structural grammatical theory as a system or a structure, where the parts are interrelated to make up a complex whole. All structural analysis is ultimately based upon observable data which is actual speech. Thus structuralists give prominence to assertions about the centrality of speech. In essence, structural grammar is a taxonomic classification, an arrangement of the data which makes no claims about the nature of the data. It is often called descriptive grammar.

B. Transformational Grammar

The term transformational can be more specifically described as transformational-generative grammar. Generative grammar is one that contains a list of symbols and a list of rules for combining these symbols in

various ways to produce every English sentence.[20] Such a grammar is said to

generate all the possible sentences in a language. It is based on the

assumption that all speakers have some method of understanding completely

novel sentences never spoken before because they have learned the structural

pattern of a language during their childhood. They can thus "generate" an

infinite number of sentences. They can also evaluate the grammaticality of

any new sentence.

Sentence transformations can be regarded as rules that combine sym-

bols in various ways. By combining the two terms, Chomsky[21] defines trans-

formational-generative grammar as a device for generating the sentences of

a language. Thus if a student understands the grammar of a language he can

construct grammatically correct sentences in that language.

This study uses the term transformational grammar rather than the

cumbersome term transformational-generative grammar.

VII. ORGANIZATION OF THE STUDY

The remainder of the study is organized in the following way:

Chapter II contains a survey of related literature. The first part

of the chapter is a description of attitudes toward grammar teaching in the

past, at present, and the likely trend in the future. Following this,

learning theories and their relationships to the teaching of grammar are

examined. Finally, the chapter is concluded with a brief discussion of some

factors related to textbook selection.

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[20]Owen Thomas, Transformational Grammar and the Teacher of English, (New York: Holt, Rinehart and Winston Inc., 1965), p. 8.

[21]Chomsky, op. cit.

Reports on the selection of the classroom for the investigation, the technique in the presentation of the textbook, the anecdotal records, the evaluative instruments, the personal questionnaire and the general procedures of the investigation are included in Chapter III.

The appraisal of the textbook is dealt with in Chapter IV.

Chapter V, the concluding chapter, contains a summary of the main findings together with certain implications for teaching, and suggestions for further investigations.

CHAPTER II

SURVEY OF RELATED LITERATURE

Much has been written about the different theories of grammar, how they differ from each other, and how effective or ineffective they are in improving students' oral and written expressions. Both Wardhaugh[1] and Ambury[2] have summaries of investigations relating to grammatical theories and practice so that there is little advantage gained by reviewing again the many pieces of research that are included in their theses. In this chapter, items which were felt to be relevant only to this study are discussed.

I. ATTITUDES TOWARD SCHOOL GRAMMAR

1. In the Past

In the Elizabethan schools of England, language instruction centred on Latin literature and was all in Latin. Grammar was taught as a tool for better expression. Later, English was used as the academic language. Its grammar based on Latin grammatical rules became an instrument expected to assist students in writing. The following quotation from J. Newberry's Grammar Made Easy, 1745, expresses what seems to be a point of view of the times:

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[1]Ronald Wardhaugh, "An Investigation of Certain Uses of a Test Constructed According to Principles of Transformational Grammar," Unpublished Ph.D. thesis, University of Alberta, 1964.

[2]Howard G. Ambury, "A Bibliographic Survey of the Literature Concerning the Place of Grammar in the Teaching of English Language in Junior and Senior High Schools," Unpublished M.Ed. thesis, University of Alberta, 1963.

This English Grammar ought to be taught to children as soon as
they have a Capacity for it, which is generally very early: for 'tis
a Shame we should be ignorant of our own Tongue:...For want of any
early Acquaintance with English Grammar, there are many grown Persons,
and those of good natural Abilities, who not only express themselves
very improperly in common Discourse but who cannot so much as write
a letter of moderate Length to a Friend or Correspondent without tres-
passing a hundred times either against the Rules of Orthography or
Syntax.[3]

The first attempts to determine what English language material to

teach in the schools grew out of this point of view and therefore resulted

in the great stress that was laid upon the study of systematic formal

grammar or, as it is most frequently termed, traditional grammar.

Because the earliest grammar textbooks were brought to America from

England, the American schools followed the English tradition. As composi-

tion and rhetoric were not given much attention, grammar was supposed to

provide the knowledge and practice that were needed for good English ex-

pression and was therefore considered a basic subject. Neitz has noted

that the grammar textbooks used throughout the nineteenth century defined

grammar more or less in the following manner: "English grammar is the art

of speaking and writing English correctly."[4] Thus the grammar textbooks

that were favored were those that set out precisely what was correct English

and laid out rules by which it was spoken or written. The students were

expected to commit the definitions and rules to memory and then later to

apply them to exercises.

Towards the end of the nineteenth century the English offering in

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[3] Charles Carpenter Fries, American English Grammar, (New York: Appleton-Century-Crofts Inc., 1940), p. 18.

[4] John A. Neitz, "Old, Secondary School Grammar Textbooks" English Journal VIX (September, 1965), p. 541.

secondary schools shifted from grammar to English composition and to some

extent to literature. According to Neitz, textbook authors such as William

Swinton, Alonzo Reed, and Brainerd Kellog stressed language and composition

rather than technical grammar.[5] The competition between the grammars of the

traditional approach and those that began to stress the application of

grammar to actual composition had begun. The aim and method in teaching

grammar was slowly changing. Francis[6] noted that this change probably came

about because the basic assumptions about language were now questioned by

the historical grammarians of the European scholarly tradition. These

assumptions were that the laws of grammar were as immutable as the laws of

nature; that is, they were absolute. Furthermore, these laws were funda-

mentally the same in all languages. Owen Thomas[7] observed that the Europ-

ean scholars successfully illustrated that certain word forms had gradually

changed over the course of the centuries. They noted one apparently uni-

versal linguistic fact: all languages change. The myth of the one ideal

pure language was thereby destroyed.

Other changes were to take place. Fries[8] stated that the measure-

ment movement in education brought the first really effective challenge of

the asserted connection between grammar and good English. The results of

the tests seemed to demonstrate the absence of any relation between know-

ledge of English grammar and the ability either to write or to interpret

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[5]Ibid., p. 545.

[6]W. Nelson Francis, "The Present State of Grammar," English Journal
LII (May, 1963), p. 319.

[7]Owen Thomas, "Grammatici Certant," English Journal LII (May, 1963)
pp. 322-326.

[8]Fries, op. cit., p. 19.

language.[9] The public however, still insisted that grammar was indispens-

ible for correct English. Grammar, therefore, had to be taught to appease

the public, but by other means rather than the formal, prescriptive

approach. The attitudes of educators can be discerned from the following

statements:

> A sane attitude toward the teaching of grammar would seem to find
> out what parts and aspects of the subject have actual value to child-
> ren in enabling them to improve their speaking, writing and reading,
> to teach these parts according to modern scientific methods and to
> ignore any and all portions of the conventional school grammar that
> fall outside these categories.[10]

Thus the teaching of "functional grammar" began. Lists of items of students'

errors were drawn up. The trend was toward concentration on a smaller num-

ber of points which were selected from the mass of conventional rules of

traditional grammar and these items were to be mastered by drill. The tea-

ching of grammar was thereby reduced and the results, according to Gleason,

were that:

> The experience of the schools with "functional grammar" has con-
> firmed that random teaching cannot work. The more grammar is cut, the
> less successful is the teaching of the remainder. The more disconnected
> the facts, the more difficult they are to teach. "Functional grammar"
> with its emphasis on errors is self-defeating. It is tantamount to the
> elimination of grammar, simply a longer, slower process to that end.[11]

The "Usage Movement" which developed in the 1930's had its origin in a study

by Leonard[12] who sought to provide the classroom teacher with accurate and

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[9]R.L. Lyman, Summary of Investigations Relating to Grammar, Language and Composition, (Chicago: The University of Chicago, 1929).

[10]Reorganization of English in the Secondary Schools, Department of Interior, Bureau of Education, Bulletin Vol. 2, p. 37.

[11]H.A. Gleason, Jr., Linguistics and English Grammar, (New York: Holt Rinehart and Winston, Inc., 1965), p. 15.

[12]Sterling Andrus Leonard, Current English Usage, (Chicago: Inland Press, 1932).

reliable information concerning English usage by making a survey of opinion about usage. The study was followed by the investigations of Marckwardt and Walcott,[13] who found the results differing from certain widely held notions about English to an even greater extent than had Leonard. They concluded their investigation by stating that the question of usage as a proper basis for grammar did not at all enter into the study which concerned itself only with collecting the record of usage of a given number of items.[14] Many of their followers, however, disregarded this statement and teaching good English meant driving out of the language of students practices which were not used by educated people. Moreover, teachers and textbook writers continued to emphasize items that Marckwardt and Walcott had found acceptable. There was an almost total neglect of grammar as a study. Present textbooks include usage but there is confusion among textbook authors about how to teach "correct" usage. Then, too, there is often con-tradiction between books in the same series. An example of this is found in the "careful prescription" of the usage of shall and will in the ninth grade, Building Better English book, and the statement in the twelfth book of this series that "Present usage tends to make little distinction between shall and will."[15] Only recently in a paper read to the English Teachers' Club of San Antonio, Texas, Sledd concluded that: "Where usage is concerned our foremost certainty is that very little can be certain."[16] Up to the

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[13]Albert H. Marckwardt and Fred Walcott, Facts About Current American Usage, (New York: Appleton-Century-Crofts, 1938).

[14]Ibid., p. 21.

[15]William R. Slothower, "Language Textbooks: A Survey," English Journal, VIV (January, 1965), p. 15.

[16]James Sledd, "On Not Teaching Usage," English Journal VIV (November, 1965), p. 699.

present decade there can be no doubt that the whole objective of including grammar, in some form or other, in the curriculum, was a means to the end of better speaking and writing. Even though there have been several attempts at reform, such as the Usage Movement, in essence the teaching has been traditional grammar taught traditionally or functionally. In 1946 Pooley noted "that grammar taught in the schools today is essentially the grammar taught in the schools one hundred years ago."[17]

Meckel[18] in a comprehensive summary of numerous investigations concluded that there is very little evidence that grammar as traditionally taught in school had any appreciable effect in improvement of writing skills. He also noted that research did not justify the conclusion that grammar should not be taught systematically. Moreover, he added that in determining what grammar is functional, teachers must rely on the opinion of linguists based on modern studies of the structure of language.

2. At Present

It took some time to accept the new grammatical theory based on the work of linguistic scientists. With the publication of two books by Trager and Smith,[19] and Fries,[20] there was a sufficient body of material to form a

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[17]R.C. Pooley, "Forever Grammar," N.A.S.S.P. Bulletin, 136 (February, 1946), pp. 45-49.

[18]C. Meckel, "Research on Teaching Composition and Literature," Handbook of Research on Teaching, N.L. Gage editor, (Chicago: Rand McNally & Co. 1963), p. 974,

[19]George L. Trager and Henry L. Smith Jr., An Outline of English Structure, (Norvan, Okla.: Battenburg Press, 1951).

[20]Charles Fries, The Structure of English: An Introduction to the Construction of English Sentences, (New York: Harcourt, Brace & World, 1952).

basis for much discussion and experimental teaching. Other books followed, including Roberts' book for high school use.[21] Sledd[22] noted that the statements by the new grammarians were neither so harmonious, so inclusive, nor so final as they seemed to naïve readers. A number of difficulties were encountered. The books had gaps which had to be filled in by the descriptions which the structuralists still had to offer. Also, different linguists differed in their use of terminology. For example, a noun was termed a Class I word in one book while another termed it a nominal. However, in spite of this, there was much enthusiasm and many schools introduced experimental programs based on the new grammar. The philosophy behind the teaching of the new grammar can be summed up by Paul Roberts' statement:

> We are sometimes told that grammar is dull but usefully a disagreeable medicine we take to cure our writing ills. It is better to look at it differently; properly approached, grammar is an absorbing interesting study, and it may even do us some good.[23]

Such statements as Roberts' "may even do us some good" prompted educators to see whether there was a possible connection between the knowledge of structural grammar and writing ability. In 1961 the investigator conducted a study in a low achievement Grade IX class to determine whether knowledge of structural grammar improved writing ability. A test, given at the beginning of the term, revealed that the class had a weak sentence sense. However, after several months, there was a marked effect on their writing

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[21]Paul Roberts, Patterns of English, (New York: Harcourt, Brace & World, 1956).

[22]James Sledd, A Short Introduction to English Grammar, (Chicago: Scott, Freeman and Company, 1950), pp. 8-9.

[23]Paul Roberts, English Sentences, (New York: Harcourt, Brace & World, 1962), p. 4.

progress. A sentence count taken from their June Departmental exams showed that, out of 762 sentences written, only 67 were incomplete. The following excerpt was taken from this investigator's report:

> Do these results mean that the understanding of the language means a greater facility in its usage? Dashwood-Jones states "that the writing of useful sentence patterns induces the feel of the sentence and that the grammar is the beginning of composition." Because there was no control group one cannot state that the results lent complete support to Dashwood-Jones' statement. One can, however, say that the results seem to indicate that structural approach has pragmatic value in its application to writing.[24]

Grady observes in a recent publication that:

> After teaching both traditional and structural syntax, I found that a structural approach to sentence completeness appealed to the students as being more logical and more easily understandable. This method improved student themes radically in a relatively short time.[25]

He had developed a structured course in composition based on a structural analysis of English syntax using duplicated sheets of information which he had gathered from Paul Roberts' English Sentences.[26] He, too, seemed to think that the structural approach had application to writing.

O'Donnell, after conducting two studies of the relationship existing between knowledge of grammar, both traditional and structural, and skill in reading and composition concluded that it was extremely doubtful that mastery of either structural or traditional grammar would automatically result in proficiency in reading and writing.[27] Wardhaugh stated, after his

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[24]A report to the Alberta Department of Education, "An Evaluation of Dashwood-Jones' Patterns for Writing," Unpublished, 1961, p.3.

[25]Michael Grady, "Structured Structuralism: Composition and Modern Linguistics," English Journal VIV (October, 1965), p. 633.

[26]Roberts, op. cit.

[27]Roy C. O'Donnell, "Reading, Writing and Grammar," Education LXXXIV (May, 1964), pp. 533-537.

review of research on the relationship of structural grammar to the improvement of writing, that there seems to be no apparent close relationship between the knowledge of structural grammar and composition ability.[28] However, in spite of this kind of evidence, many educators take the view that grammar should be taught for its own sake as well as for any instrumental value that it may have.

The transformational grammar theory is one of the most recent. It has had a profound influence on the thinking of American grammarians. In his discussion of its value, Marckwardt says that:

> Its appeal lies perhaps in the emphasis upon production rather than description and it appears to have implications for language units larger than the sentences though these have not been worked out.[29]

Paul Roberts was one of the first to publish a book which incorporated Chomsky's theory.[30] In 1964, he followed it by still another, a programmed approach designed to teach transformational principles to students in secondary schools.[31] Slothower, in a review of secondary textbooks on English indicates that the inclusion of transformational grammar as well as structural grammar has been almost negligible. He observes that:

> The situation regarding linguistics in the school books at this time is at best ambiguous. Authors and publishers are playing it safe by adhering, on the one hand, to traditional methods by analysis and, on the other hand, giving a kind of lip-service to new techniques just sufficiently to allow them to state in their prefaces and promotional

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[28]Wardhaugh, op. cit., p. 29.

[29]Albert H. Marckwardt, "Linguistic Issue: An Introduction," College English XXVI (June, 1965), p. 23.

[30]Roberts, op. cit.

[31]Paul Roberts, English Syntax, (New York: Harcourt, Brace & World, 1964).

material; "This book gives students a view of language based on accurate scientific observation" or "This book takes advantage of the findings of recent research in linguistic science."[32]

Some linguistically oriented textbooks that do exist are very recent and cannot be said to have had more than initial trials. These include: Modern English Sentence Structure,[33] a programmed textbook now being tried in Oregon; Programmed Grammar,[34] which examines the structure of written English; An Introductory English Grammar,[35] where the first part of the book is based primarily on structural grammar but is supplemented by occasional borrowings from transformational grammar and the latter part is based on transformational grammar which is closely meshed with the preceding structural description. Transformational Grammar and the Teacher of English,[36] is a reference primarily for teachers.

As for the relationship of transformational grammar to writing ability, several studies have been and are being carried out. In one study known as the Cooperative Research Project #1746 transformational grammar was taught to an experimental group of students of the Ohio State University Centre for School Experimentation. The composition themes written by these students were compared with those written by a control group of students. Zidonis has concluded from this study that:

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[32]Slothower, op. cit., p. 10.

[33] Syrell Rogovin, Modern English Sentence Structure, (Random House/ Singer, 1964).

[34]M.W. Sullivan, Programmed Grammar, (New York: McGraw-Hill Book Company, 1964).

[35]Norman C. Stageberg, An Introductory English Grammar, (New York: Holt, Rinehart and Winston Inc., 1965).

[36]Owen Thomas, Transformational Grammar and the Teacher of English, (New York: Holt, Rinehart and Winston Inc., 1965).

1. A knowledge of generative grammar enables students to increase sig-
    nificantly the proportion of well-formed sentences they write.
2. Statistical analysis suggests, but does not prove, that there is a
    relation between a knowledge of generative grammar and an ability
    to produce well-formed sentences of greater structured complexity.
3. A knowledge of generative grammar can enable students to reduce the
    occurrence of errors in their writing.[37]

Wardhaugh also attempted to re-examine the relationship between gram-

matical knowledge and composition ability. He administered a transforma-

tional grammar test and the best available essay test as well as a tradi-

tional grammar test to students at the senior high school level who had

been taught traditional grammar. The investigation was deliberately designed

so that every advantage would accrue to the traditional grammar test rather

than to the transformational grammar test. Of this investigation Wardhaugh

states that:

> In view of the fact that none of the students in the experimental
> population had been taught any other grammar than traditional grammar
> the inability of the Transformational Grammar Test to demonstrate a
> significantly better connection between grammatical ability and com-
> position ability than does the Traditional Grammar Test is not surpris-
> ing. Although a significant superiority in prediction was not achieved
> for the Transformational Grammar Test in these circumstances, some
> superiority was found as evidenced by the higher correlation coeffic-
> ient between the Transformational Grammar Test and the Essay Test than
> between the Traditional Grammar Test and the Essay Test.[38]

Newsome[39] showed evidence that using both structural grammar and

transformational grammar improved writing style which she says "depends upon

the choice of words and the way they are put together. Grammar shows how

words are put together." She had students write basic sentence patterns

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[37]Frank J. Zidonis, "Generative Grammar: A Report on Research,"
English Journal VIV, (May, 1965), pp. 405-409.

[38]Wardhaugh, op. cit., pp. 120-130.

[39]Vera L. Newsome, "Expansions and Transformations to Improve Sen-
tences," English Journal LIII, (May, 1964), pp. 327-335.

such as "He found the lever." Then the students would expand these basic

sentences by additional predicates. An example of such expansion is "He

found the lever, gripped it, and released it." Following this procedure,

students added various structures of coordination and subordination which

could be shown most clearly by transformation--that is by combining two or

more sentences to form a new sentence such as "The play has an exciting plot

but the characterization is weak." She concluded that both the two tech-

niques of expansion and transformation could be used to help students write

more sophisticated sentences.

Although research has not yet revealed any further evidence to show

that the knowledge of transformational grammar improves writing ability,

there does seem to be at least a promise that future investigations may

provide some evidence.

Kitzhaber, however, is not concerned about research evidence and in

the Foreword to a new textbook based on transformational grammar states:

> This book invites the student to study the nature of his own langu-
> age simply because as a human being he should be expected to be curious
> about that invention which, in large measure, makes him human. The
> study of grammar, then, is justified in the book on the grounds that it
> will offer knowledge that is intrinsically interesting and worthwhile--
> knowledge for the sake of knowledge.[40]

3. In the Future

Hogan, in a recent address, noted that among recent trends there was

a greater concern for the content of the English program--a concern for

finding teachable areas of English such as phonology, history of the English

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[40]Albert R. Kitzhaber, Foreword to Modern English Sentence Structure
by Syrell Rogovin, (Random House/Singer, 1964).

language and the social significance of regional varieties in English.[41]
The dimensions of grammar are being broadened so that this part of the cur-
riculum is being more often referred to as language. The desire is clearly
for a more comprehensive and integrated treatment for language in every
aspect.

Cain argues that in setting up new textbooks and programs it is nec-
essary to make the maximum use of what students already know and to intro-
duce as little new terminology as possible. Moreover, the best aspects of
every grammatical theory should be used so that the grammar text should be
able to give a great deal of instruction not affected by differences on the
frontier theorization of linguists.[42] Francis feels that what is needed
"is to increase the user's power over language and provide him with keys to
the treasures of knowledge, experience and pleasure that control of language
has made possible."[43]

The Commission on English of the College Entrance Examination Board
in its recent report,[44] emphasizes the necessity of a teacher's familiarity
with traditional grammar, structural linguistics, and transformational
grammar. It seems that Sledd[45] in his plea for pluralism has made some

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[41]Robert F. Hogan, "Trends and Traditions on the Teaching of English,"
The English Teacher, V, English Council of the Alberta Teachers' Association,
(June, 1965), p. 9.

[42]R. Donald Cain, "What Do We Mean by Linguistics?" English Journal
XIV, (May, 1965), p. 402.

[43]W.N. Francis, "Language and Linguistics on the English Program,"
College English XXVI, (October, 1964), p. 13.

[44]Freedom and Discipline in English, Commission on English (New York:
College Examination Board, 1965).

[45]James Sledd, "Plea For Pluralism," Linguistics Current Issue,
National Council of Teachers of English, pp. 15-20.

impact, and the trend is for the inclusion of the best of each grammatical theory.

Moreover, there is an ever-growing optimism that, with the emphasis on communication, students will gain a greater insight into the language. Rosenbaum,[46] is confident that this insight can be provided by transformational grammar only, and it is very likely that this theory will be exploited more fully in the newer textbooks. Allan feels that the emphasis on "a given construction, a given sentence is the best in a given place" will result in better speaking and writing.[47] Transformational grammar is an important new challenge that appears to have far-reaching results.

Gleason foresees a widening of the scope of grammar to include literature and composition--the possibility of a "language-centred curriculum." He emphasizes that:

> In such a curriculum grammar must certainly have a central place as one of a number of basic sub-disciplines. That language has structure and system is fundamental, not only to the study of language in the abstract but equally to the scholarly consideration of the use of language--that is, to major dimensions of the work in composition and literature. Grammar is the study of structure and system in one of its most significant aspects. An integrated English curriculum must make grammar an important element, if it is to deal adequately with many of its proper concerns.
> Grammar, as it has been known in the American schools, however cannot bear such a responsibility. It is too narrow in scope, too shallow, too isolated from other disciplines and too intellectually sterile. It is, in fact, only a caricature of what it ought to be. To serve in a new curriculum grammar must be rehabilitated, given a new content and new image.[48]

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[46]Peter S. Rosenbaum, "On the Role of Linguistics in the Teaching of English," Harvard Educational Review XXXV, (Summer, 1965), pp. 332-345.

[47]Harold S. Allan, "From Prairie to Mountain: Linguistics and Composition," College English XXVI, (January, 1965), p. 265.

[48]Gleason, op. cit., p. 472.

Guth is determined that grammar should be taught as a subject in its own right and not as part of an integrated English curriculum. He says:

> A systematic, cumulative instruction can tap a source of motivation often denied to an integrated approach. As relationships become clear, as the major outlines of subjects emerge, the student can begin to say to himself: "Ah! Now I see." Before, all this seemed always miscellaneous, confusing, one thing after another. But now it begins to hang together. "It is beginning to make sense." One of the most basic human motives shared by scientists, artists, dogmatists, authoritarians, is to find the simple pattern underlying the bewildering flow of experience. One thing that modern linguistics encourage is to do mobilize the rage for order, the search for the pattern, in the study of language.[49]

There are numerous arguments about the teaching of grammar. What is apparent is that educators are giving thought to new ways of looking at language. Whether grammar should be taught for its own sake or for other values is still to be determined. Owen Thomas sums up the new philosophy of the teaching of grammar by stating that:

> We need not envy the scientists who, perhaps, are ready to open the door to life. Rather, with the tool of language, every teacher of English can open the door to that which is the highest culmination of life: the mind of man.[50]

II. LEARNING THEORIES AND GRAMMAR

The educational objectives of satisfactory new textbooks should take into consideration the psychology of learning in the presentation of learning materials. Following is a brief discussion of learning theories as they were developed and as they are today.

It is quite possible that the eighteenth century concept of teaching

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[49] Hans Guth, "Subject Matter Determines Method," English Journal (November, 1965), pp. 683-684.

[50] Thomas, op. cit., p. 224.

grammar arose from the mind-substance psychology of learning in which the mind was thought to be a substance that could be moulded or a muscle that could be exercised by difficult tasks. Hall-Quest said of this: "The muscles were developed by hard regimens of drill, so by difficult studies based on reasoning the mind would also gain power."[51] Thus, the memorization of rules was a necessary requirement of the traditional approach to grammar. Moreover, it was thought that since the correct rules of grammar were developed by means of logical deductions, the practice of logic helped train the mind to think logically.

Thorndike's studies of learning[52] resulted in the conception of the transfer of training where "learning" implied specific training for each specific ability in every activity. The implication for schools was that lists of important items should be made and students should be taught to react to them one at a time. Fries[53] noted that this emphasis showed itself in grammar teaching by many efforts to discover the particular items of language form and structure which should furnish the material for drill. Repetition, drill, analysis, and memorization were very much part of the the traditional grammar approach of this period.

John Dewey's influence also had implications for learning theory. McDonald notes that to Dewey "learning was problem solving of intelligent action in which the person continually evaluated his experience in the light

[51]Alfred Hall-Quest, "Three Educational Theories: Traditionalism, Progressivism, Essentialism," School and Society (November, 1942), pp. 452-459.

[52]E.L. Thorndike, "Mental Discipline in High School," Journal of Educational Psychology, 15 (1924), pp. 1-22, 83-98.

[53]Fries, op. cit., p. 20.

of its foreseen and experienced consequences."[54] Thus the child-centred curriculum came into existence, with the curriculum being based upon a series of experiences which would help the child get along in society. The teaching of grammar became functional. Grammar was taught only when it was felt necessary to help the student express himself more effectively. The "point of need" and "point of error" method of teaching grammar became central for many educators.

When the Gestalt psychology of learning was introduced, it soon came to be the preferred psychology of educators. Historians of psychology must recognize its impact whenever there are references to cognitive processes, to structures that evolve from figure ground relationship, and to wholes as different from their parts.[55] All of these have had major implications for grammar teaching.

The Gestalt psychologists emphasized the role of generalization in conceptual learning. Cronbach describes this briefly:

> A generalization is a relation between concepts. A concept is meaningful to a pupil when he knows where it applies and where it does not, i.e., when it has concrete referents. A proper program for developing concepts would include the following elements:
> 1. An adequate realistic experience to provide a basis for understanding. Such understanding can come if the experience is reflected upon.
> 2. Formulation of generalizations in explicit terms.
> 3. Application of the generalizations by the students to a variety of visualized situations.

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[54]Frederick J. McDonald, "The Influence of Learning Theories on Education," Theories of Learning and Instruction, National Society for the Study of Education, (Chicago: University of Chicago Press, 1964), p. 13.

[55]Earnest R. Hilgard, "The Place of Gestalt Psychology and Field Theories in Contemporary Learning Theory," Theories of Learning and Instruction, National Society for the Study of Education, (Chicago: University of Chicago Press, 1964), p. 77.

4. Consideration by the student of systematic relations between situations.[56]

The teaching for higher conceptual learning became one of the primary forces in education. Meyer[57] noted that a knowledge of the structure and vocabulary of one's native language facilitated conceptual learning. He concluded that the major implication resulting from his research on the higher thought processes was that there was a need for recommendation of textbooks and/or program in terms of (1) provision of a variety of instances of a concept and (2) guiding the students in identifying and attaining the concepts.

Bruner's[58] statements on the cognitive processes provided some insight for educators. He noted that there were two interesting features in generic learning, the kind of learning that enables one to think: organization and manipulation. Organization is a means of condensing and recoding-- a manipulation as it were of large masses of information which the mind cannot handle. Thus his statement that "The teaching and learning of structure rather than simply the mastery of facts and techniques is at the centre of the classic problem of transfer"[59] had come precisely at the time when the structural linguists with their study of language as a system or structure, were making the greatest impact on the teaching of language. The two

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[56]Lee Cronbach, ed. Text Materials in Modern Education, (Urbana, Illinois: University of Illinois Press, 1955), p. 78.

[57]Marshall E. Meyer, "Some Implications of Empirical Studies in Higher Thought Processes for Science Education," Dissertation Abstracts XXIII (1962-63), p. 889.

[58]Jerome S. Bruner, "Learning and Thinking," Readings in the Psychology of Cognition, ed. Anderson and Ausubel, (New York: Holt, Rinehart and Winston Inc., 1965), pp. 76-86.

[59]Jerome S. Bruner, The Process of Education, (Cambridge: Harvard University Press, 1961), p. 20.

ideas were certainly compatible. Moreover, Bruner emphasized that it is

possible to present the fundamental structure of a discipline in such a way

as to preserve some of the exciting sequences that lead the student to dis-

cover for himself. The following statement taken from a recent language

program of studies is indicative of the trend:

> The emphasis in grammar is on a descriptive and structural approach
> not on the memorization or definition of rules. As much as possible an
> inductive method should be used.[60]

Bloom and his committee in setting up their Taxonomy of Educational

Objectives incorporated new ideas about learning processes but they agreed

that what is needed is a larger synthetic theory of learning than at pres-

ent seems available. Bloom states that:

> We are of the opinion that our method of ordering educational out-
> comes will make it possible to define the range of phenomena for which
> a theory must account. The taxonomy also uses an order consistent with
> research findings and it should provide some clues as to the nature of
> the theory which may be developed.[61]

Perhaps Bloom's "larger synthetic theory of learning" is not too dis-

tant. Chomsky's transformational theory of grammar has caught the attention

of psychologists. In providing the most general account of linguistic

structure, the transformational approach to linguistic inquiry may yield new

insights into human intellectual capacity, namely those innate properties of

the human mind which allow for acquisition and use of language. Although

psychologists do not as yet know the inner processes by which one acquires

and uses a language, they are searching for empirical evidence to support a

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[60]English 8 - Language Preliminary Edition (Victoria: British Columbia
Department of Education, 1962).

[61]Benjamin Bloom, ed. Taxonomy of Educational Objectives, (Toronto:
Longmans, Green & Company, 1956), pp. 1-207.

transformational theory. Miller[62] has been conducting experiments with subjects by giving them the directions for transformations and recording how long it takes the subject to perform the transformations. His thesis is that the more complicated the transformation, the longer it will take to perform the operations involved in producing a new sentence. He hopes that the directions for transformations will correspond to the cognitive processes that go on within the individual. The results are inconclusive but he is optimistic in his belief that the best way to study a human mind is to study the verbal systems it uses. If he is proved to be correct, the transformational theory of grammar should give many insights into the psychology of learning.

The development of educational objectives with their roots in the principles of learning theories has great implications for the teaching of grammar. The theories imply that grammar should be taught inductively rather than as a series of rules. Students should be led to discover the underlying structure of their language. Moreover, they should be given adequate realistic experiences so that they will have the basis for a variety of concepts necessary for higher conceptual learning. What is needed is a larger synthetic theory of learning. However, there is an indication that the transformational theory of grammar may provide insights into the human mind which may result in new knowledge about learning theories.

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[62]George A. Miller, "Some Psychological Studies of Grammar," Readings in the Psychology of Cognition, Anderson and Ausubel, editors (New York: Holt, Rinehart and Winston Inc., 1965), pp. 321-348.

III. SELECTION OF TEXTBOOKS

Some educators have criticized the present form and use of the text-book by the derogatory phrase "textbook education." They have suggested as substitutes procedures and methods directly adapted to a particular situation. Teachers, however, have not had sufficient confidence in the substitutes offered to abandon the use of class textbooks. As a coordinator, the investigator had the opportunity to often hear English teachers express their desire for textbooks which would present the study of language in a systematic and orderly fashion.

In defense of the textbook, Berman[63] noted that if the goal of education is to teach children to think, to understand, or to clarify their values then the textbook is probably a sound educational tool. According to her the textbook can provide a body of knowledge important to the culture of which the student is a part, for he can then reflect upon the meaning of what he has read and analyze his thoughts about the subject under consideration. Moreover, textbooks can be used to personalize instruction, for the material can be revamped, added to, deleted from, and modified to meet the needs and interests of a person, or groups of persons. She observes that "The opportunity for personalizing instruction is highly significant in a society which prizes the fullest development of the individual."

Director Alan Waterman[64] of the National Science Foundation stated that textbooks are vital to the progress of science especially in the fast

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[63]Louise M. Berman, "In Defense of the Textbook," Elementary English XLI (April, 1964), pp. 434-439.

[64]Alan Waterman, "America's Stake in Pure Science," The Wiley Bulletin XXXVI (Spring, 1953), pp. 1, 3, 4.

developing sciences at the frontier of knowledge. Moreover, he said that

textbooks should be fully contemporary in spirit and content. When modern

educational objectives are embodied in new text materials, textbooks can

serve effectively for schools turning towards new curricula. Cronbach notes

that the textbook can encourage discovery because the textbook "organizes

past experiences so that the learner can grasp its values and limitations."[65]

Thus, the printed materials in the modern school involved in new curricula

and new methods should prove just as useful as they had been in the tradi-

tional school.

The problem of textbook selection is an important one. The vagueness

of ideas about what constitutes a good text, and the criteria for determin-

ing what a good textbook is, have been the main stumbling blocks in selection.

Cronbach[66] observed that some educators hold the view that a good text is

made up of discrete items which can be examined and rated independently of

each other. The sum of the ratings of individual items is believed to be a

measure of the quality of the text. For many years score cards were used

almost exclusively to evaluate and appraise textbooks. The Thirtieth Year-

book of the National Society for the Study of Education summed up this atti-

tude by stating that score cards presented a convenient means for checking

different elements that must be considered if a textbook is fully to realize

its purpose.[67] In 1931 Jensen found that in 172 cities studied, about 40

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[65]Cronbach, op. cit., p. 25.

[66]Ibid., p. 177.

[67]The Thirtieth Yearbook of the National Society for the Study of Education, The Textbook in American Education (Bloomington: Illinois Publishing Company), p. 149.

per cent used score cards in selecting textbooks.[68]

Good[69] suggested that criticism of the use of score cards seemed to grow primarily out of the fact that there was a strong tendency to set up such instruments with a particular set of books in mind so that score cards actually favored these books and resulted in the selection of those books. He noted also a second basis of criticism in that score cards were rather mechanical and overlooked a number of the more important psychological elements of a textbook that could be evaluated only by actual tryouts or by general appraisal.

In view of this type of criticism Cronbach stated that educators began to hold the view that the textbook was "a conception of the master-teacher approach."[70] In other words the text was a teacher in print. Consequently, the aims of education were left completely in the hands of the authors and educators and the best method of selection was thought to be by committees of educators. Bell[71] noted that in Alberta textbooks were selected by members of the various subcommittees of the Curriculum Branch of the Department of Education.

However, a third element of textbook selection was slowly becoming recognized. Several authorities were emphasizing that no evaluation of texts as they are or as they might be is possible until they are tried out

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[68]C.V. Good, The Methodology of Educational Research (New York: P. Appleton-Century-Company Inc., 1941), p. 694.

[69]Ibid., p. 436.

[70]Cronbach, op. cit., p. 179.

[71]J.E. Bell, "An Experiment in Textbook Selection for Grade X Language," Unpublished M.Ed. thesis, The University of Alberta, 1962, p. iii.

in actual teaching situations involving the kind of students and teachers for whom they are designed. Good[72] has observed that the educational interest of the student should be the primary consideration in appraising plans for making and selecting textbooks. Cronbach states that the success or failure of a textbook is "ultimately determined by what students do or fail to do and what they know or fail to know."[73]

After reading the literature on textbook selection, one can draw the conclusion that one of the best presently known methods in textbook selection is to have a teacher or teachers take the new textbook into the classroom where the students' reactions to the material can be observed. It can then be appraised for its usefulness from both the teachers' and the students' points of view.

IV. CONCLUSION

New developments in the study of language necessitate a new philosophy for the teaching of grammar.   Since there are presently several theories of grammar, the best of each theory should be made available to students.

Should grammar be taught for its utilitarian or for its humanistic values or for both is a question that is still of concern to educators. It seems likely that studying grammar just for "its own sake" can provide insights into the process of language which may foster more effective use of the language. There is some indication that transformational grammar may

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[72]Good, op. cit., p. 694.

[73]Cronbach, op. cit., pp. 180-181.

prove to be useful for good English expression.

New textbooks in grammar should incorporate the best that is known about learning theories. Many educators state that the ideal process for learning is the process of discovery. Thus an inductive approach should enable students to understand the systematic structure of the language. New textbooks should be evaluated by actual use in the classroom where the students can be observed as they attempt to learn the principles of language. The effectiveness of a textbook can thus be appraised.

CHAPTER III

DESIGN OF THE STUDY

A primary purpose of the design was to make the study as objective as possible. Thus the following factors were considered: the selection of the class; the procedure; the anecdotal records; the evaluative instruments; students' interest questionnaire; and the treatment of data.

The design of the study was based on several assumptions. One of these assumptions was that insight is a complex behavior built on the foundation of simpler behaviors. It can be attained through a hierarchy of knowledge, developing from the simplest response capacities to logical thought and proceeding from fact to generalization to relationship to application. Another assumption was that the principal effects of knowledge can be observed by (1) performance of verbal responses (2) production of new knowledge and (3) overt behavior. The third assumption was that by observing these effects, it is possible to determine whether an insight into the nature of a subject has been attained.

I.   SELECTION OF THE CLASS

The selection of the class for the investigation was made in October, 1965. As the manuscript had been written for the junior high school, particularly for Grades VII and VIII, a Grade VII class was selected from an elementary junior high school. The class was comprised of 16 girls and 13 boys, a total of 29 students. The intelligence scores[1] according to the Laycock

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[1]Appendix H.

Mental Ability Test[2] administered in Grade V, ranged from 89 to 140, with a mean of 112.8. Their ages ranged from 11 years 7 months to 13 years. These students were chosen because they were considered by the principal to be an average group in a school where the students are not grouped homogeneously. It may be interesting to note that the mean I.Q. of the Edmonton student population, as measured by the Laycock test, during the past few years has ranged between 110 and 115. This class had been taught a little traditional grammar, but they did not know any other grammatical theories.

II. PROCEDURE

1. Period of Investigation

Beginning October 13, 1965 the investigator met with the class every Tuesday and Wednesday for a forty-minute period from 8:50 a.m. to 9:30 a.m. The study consisting of forty lessons, continued until March 11, 1966. The students did not have any grammar instruction except that which they received during these periods. They had five other language periods during the week and these periods were given over to writing, spelling, oral work, and other language matters, taught to them by their regular language teacher.

2. Technique of Presentation

Travers[3] has emphasized that it is always through responses that the success or failure of a program can be established. The class was encouraged to make responses freely and frequently. The class atmosphere was

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[2]S.R. Laycock, Laycock Mental Ability Test, (Saskatoon: University of Saskatchewan, 1933).

[3]M.W. Travers, An Introduction to Educational Research, (New York: The Macmillan Company, 1960), p. 12.

informal with desks frequently arranged in large semi-circles of two rows facing each other.

The manuscript was adhered to as closely as possible. The investigator usually began the lesson by writing on the blackboard a key word or phrase pertaining to the lesson. This key word or phrase served the purpose of a brief introduction to the lesson. A discussion of the lesson would then follow. The investigator acted as discussion chairman, regulating communication, and encouraging students to develop the ideas which they had gathered from the content in the manuscript and from each other during the discussion. Since one of the primary objectives of the manuscript was to give insight into the structure of the language, the posing of questions was deliberate and frequent. Gagne and Smith's[4] study has demonstrated that verbalization has the effect of making students think of new ideas, facilitating both the discovery of general principles and their application to new material. Thus nearly all the exercises in the manuscript were done by oral responses.

III. ANECDOTAL RECORDS

Bayles notes that:

An anecdotal record although not readily amenable to tabulation and statistical treatment is a form whose significance and value is receiving increasing recognition.[5]

As it was felt that anecdotal records would be of significance and value for

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[4]Robert M. Gagne and Ernest C. Smith, Jr., "A Study of the Effects of Verbalization on Problem Solving," Readings in the Psychology of Cognition, ed. R. Anderson & Ausubel, (New York: Holt, Rinehart and Winston Inc., 1965), p. 391.

[5]Ernest C. Bayles, Democratic Educational Theory, (New York: Harper & Brothers), p. 224.

this study, records were kept of very lesson.[6] These records, written

after the class period, gave information about any supplementary material

which was used as well as information about the actual learning process it-

self. They indicated whether anything unusual or unforeseen had arisen dur-

ing the lesson and they also indicated whether the material was or was not

suitable. The records were an attempt to put the observations of students'

reactions to the manuscript material into some organized fashion.

IV. EVALUATIVE PROCEDURES

1. The Effectiveness Instrument

Because the review of literature on the selection of textbooks had

revealed that score cards were inadequate, the effectiveness of the text was

measured primarily by means of an original instrument constructed by the in-

vestigator. In developing the instrument the investigator was guided to a

large extent by the thinking of Cronbach and Bloom. Cronbach[7] noted that

the present knowledge of psychology suggests certain questions that should

be considered in evaluating any text. He then listed twelve questions which

he felt relevant to textbook evaluation. Bloom states that:

> We are concerned with the changes produced in individuals as a re-
> sult of educational experiences and that these changes can be repre-
> sented by the actual description of the student behaviors which are
> regarded as appropriate or relevant to the objectives.[8]

It was thought necessary to devise an instrument which would

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[6]Appendix A.

[7]Lee Cronbach, ed., Text Materials in Modern Education, (Urbana,
Illinois: University of Illinois Press, 1965), pp. 90-91.

[8]Benjamin S. Bloom, ed., Taxonomy of Educational Objectives, (Long-
man, Green & Co., New York: 1956), p. 12.

incorporate some of Cronbach's suggested questions and some of Bloom's ideas, thereby evaluating the teachability of the textbook by observing student behavior. The effectiveness instrument[9] contained ten items considered to be an adequate representation of acceptable evaluative criteria. These criteria were placed on a five point scale ranging from "very effective" to "not effective." The instrument was marked by the investigator immediately after the lesson.

2. The Observer's Instrument

.Shortly after the study began, it was felt that effectiveness could be gauged more efficiently if there was another observer present during the investigation. The home room teacher was selected to act as an observer. She was accordingly instructed as to how and what she was to record. Both she and the investigator decided what type of information was to be accepted as a fact, as a generalization, as a relationship, and as an application. The first day she observed was for the purpose of orienting herself to the procedure. Throughout all the remaining lessons, she remained at the back of the classroom, and since she knew the students, she was able to record the responses as quickly as they were made. Beginning on November 16, 1965 she observed 30 lessons.

The instrument[10] which the observer used was also devised by the investigator. It was an instrument which measured the number of responses made by each student in the class during each period. It indicated the kind of response that was made by recording whether the response was in the form

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[9]Appendix B.

[10]Appendix C.

of a fact, a generalization, a relationship, or an application. A fact was
taken to be a particular item of information; for example, a statement
"the is a determiner," was recorded as a fact. A generalization was recorded
when the student was able to recognize or recall a principle or generaliza-
tion. A statement such as the following: "If s can be added to a word to
make it plural, that word is a noun," was taken to be a generalization. A
relationship was recorded when the student was able to show an understanding
of the relation between concepts. An example of such understanding can be
illustrated by such a sentence as "We cannot be certain as to whether a word
is a noun until we see its position in the sentence." The student had to
demonstrate his ability to understand the significance of particular words
in the light of their context. An application was taken to be the ability
of the student to solve a problem new to him without being prompted. An
illustration of this was a student's making a function noun out of an adjec-
tive such as beautiful by saying "The beautiful are with us." He had thus
demonstrated that he had gained insight into the structure of the language
and the observer recorded his response as an application. The observer re-
corded all the lessons in this manner.

V. STUDENTS' QUESTIONNAIRE

The interest of the students should be of primary consideration in
appraising any classroom material. An interest questionnaire[11] was given
to the class at the end of the investigation. It was an informal question-
naire designed to discover:

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[11]Appendix D.

1. The students' self-evaluation of change in knowledge about language concepts.

2. The students' attitudes in general, particularly their interests.

3. The students' evaluation of the manuscript.

There were eleven questions which students were to use to structure their written comments. They wrote their comments in any form they wished. In this way it was felt the comments would be more expressive of their opinions.

VI. TREATMENT OF DATA

After the completion of the investigation the anecdotal records were used as a basis for the discussion of the applicability of the manuscript materials to the teaching situation in the junior high school.

The first eight lessons were not evaluated, because they were used for the purpose of orientation. The thirty lessons that followed were used. The questions on the teachability of the manuscript in the investigator's effectiveness instrument were tabulated[12] and the mean was then estimated for each question. The analysis of these mean scores was directed toward discovering:

1. The degree of the effectiveness of each criterion,

2. The criteria which seemed most effective,

3. The criteria which seemed least effective.

The observer's instrument was tabulated in the following ways:

1. The first tabulation[13] was a total number of facts, generalizations,

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[12]Appendix E.

[13]Appendix F.

relationships, and applications for each lesson. Then the percentage of
facts and the percentage of the combined totals of generalization, relation-
ships, and applications were estimated for each lesson. The data were used
to discover whether the manuscript enabled students to understand the struc-
ture of the language.

2. The second tabulation[14] was the total number of responses for each
student, during the last ten lessons. The students were ranked on two vari-
ables: their total number of responses and the estimated degree of their
understanding. Both the observer and the investigator collaborated in rank-
ing their degree of understanding. The rank order correlation was used to
determine whether there was any relationship between the number of responses
made and the estimated students' degree of understanding.

The students' interest questionnaire was used to discover whether the
material in the manuscript held the interests of the students. The answers
in the informal questionnaire were compiled and used as a basis for discus-
sion of student opinions about the manuscript.

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[14]Appendix G.

CHAPTER IV

RESULTS OF THE INVESTIGATION

The general procedure in the teaching of the manuscript material is outlined in Chapter III. The manuscript in its original form contains eight chapters but it was intended that only chapters one to seven would be taught in this study. The following are the titles of these chapters:

Chapter One - How We Express Ideas

Chapter Two - Nouns.

Chapter Three - Verbs

Chapter Four - Adjectives

Chapter Five - Adverbs

Chapter Six - Substitute for Form Class Words

Chapter Seven - Kernel Sentences and Kernel Strings

The chapters varied in length, with those on the noun, the verb, and the kernel sentences being the longest. Although each chapter was divided into exercises, each exercise did not necessarily constitute the work for one class period. It was conceivable that two, three, or even four exercises could be done in one class period. This, of course, depended on the length as well as the difficulty of the lesson, as the longer and more difficult lessons took more time to do.

There were 126 pages covered during the period of investigation. Of these, only a few were done outside of the classroom period. These were given for homework assignments so that the investigator could determine whether the students were able to use the book by themselves without any assistance from either the group or the teacher.

This chapter discusses the findings of the investigator on the lessons taught. The anecdotal records are examined first, the effectiveness instruments next, and finally the students' interest questionnaire.

I. DISCUSSION OF THE ANECDOTAL RECORDS

As has been pointed out in Chapter III, an anecdotal record was kept of each lesson taught. It was from these records that the ideas were drawn for the following discussion. It must be pointed out that several records were combined in order to discuss the more logical divisions in the manuscript.

1. The Introductory Lesson

This lesson was taught on October 13, 1965. Its prime function was to arouse interest concerning this investigation. Students were briefly told about some of the new developments that had occurred in the study of language. They were also briefed as to what to expect during the next few months. They were to look upon this period as an experiment in which they were to help by assessing the worth of the language manuscript. They were instructed to question things they did not understand. Moreover, their cooperation in discussing the ease or difficulty of the concepts being taught to them was necessary if there were any changes or revisions to be made.

2. Form Class and Structure Words

Both the terms _form class_ and _structure words_ were new to the students. They were presented with the definition that form class words were "words that can change their form." From this they were led to generalize that structure words were words which did not change their form.

Although the manuscript does not state this specifically, the students were led to reflect on the few inflections in the English language. Their curiosity was so aroused that in one period a student produced a French textbook to compare French and English inflections. This was an interesting occurrence in view of the fact that this class does not take French.

An exercise on nonsense words was a totally new experience for them. A sentence such as "The snookles can loof" demonstrated that they could recognize form class words even though these words were meaningless. Moreover, it demonstrated that language could be fun.

3. Position, Intonation, Inflection, and Signal Words

This was a relatively simple unit, or at least relatively simple the way the manuscript presented these aspects of grammar. Such sentences as "Boys eat fish," "Fish eat boys" used to illustrate the importance of position were well suited to this age group. The same sentences were used to illustrate intonation in speech. They were particularly applicable to group participation. The exercise also lent itself easily to other suggestions from the class. One suggested sentence "Dad, please can I have my allowance" was given in a variety of intonation to convey different moods.

Exercise 14, on inflections of nouns and verbs, seemed to be a mixture of concepts; that is, there would be sentences on verbs, then on nouns, then on verbs again. Some students pointed out that it would be clearer to them if all the sentences on the noun would be grouped together, followed by all the sentences on the verbs. It would therefore be more logical and sequential. The investigator felt that this was a good suggestion and that the exercise could be improved by a simple reorganization.

It was interesting to note that several anecdotal records ended with

sentences such as "Highly satisfactory," "Class participation excellent" and "No problems."

4. Nouns

The manuscript in deviating from the traditional definition of a noun that it is "the name of a person, place or thing," showed instead that a noun can be recognized in a number of ways.

5. Recognizing Nouns by Inflection

This lesson was an illustration of the use of the inductive method. A group of plural nouns such as ladies, stories, bodies, were followed by another group such as alleys, valleys, pulleys. After examining these, the students were able to make their own rules about words ending in y. The whole concept of recognizing nouns by their plurals was developed in this way. An interesting discussion arose when someone in the class suggested that the word measles could be taken to be either singular or plural. This led to a discussion of other similar words. A discussion such as this indicated that interest was being aroused and that the students were thinking about the differences as well as the relationships in the language.

The first time that students encountered a paradigm was the first introduction to transformational grammar where they were shown that "ladies ——> plural + lady"." The investigator had some doubt that Grade VII students could handle even such simple transformations. However, they had no problem and could easily fill in the blanks in a paradigm such as "children ——> _____ + child." They seemed to understand the transformations involved.

Quite often students have difficulty with the possessive form which

they confuse with the plural form. However, the many examples and the inductive approach enabled students to see the fundamental rule that nouns were the only words in the English language that can take possessives. This was an interesting discovery to them. One student commented: "Yes, of course, now I see. This all makes sense. It's just that I had never thought of it before."

The only exercise that gave some problem was one which discussed such phrases as a day's work, Shakespeare's plays. The statement that "a day's work does not mean that the day possesses the work" seemed to confuse them. No one could explain what it really meant until there was some prompting by the investigator.

6. Recognizing Nouns by Position

The term determiner had never been used by the class before. There were numerous examples of its use in the manuscript. The class was led to make their own generalization that "when we see the or a in a sentence we can be sure that a noun is to follow." One of the sentences given by the investigator "Baby swallows fly" was shown by the students to mean either "The baby swallows fly" or "Baby swallows the fly." This kind of observation demonstrated that they were beginning to get an understanding of the underlying structure of the language. They quite often reverted to using the familiar term article; however, after a few lessons, they used the term determiner freely.

7. Recognizing Nouns by Their Forms

The manuscript introduced the derivational suffixes (-er), (-ment), (-ion), and (-ance) by stating that "many words can be made nouns by the

addition of such affixes." Students seemed to understand the difference between inflectional and derivational suffixes. One student questioned whether a word could have an infix, a prefix, and a suffix. After some consideration, the student himself suggested the word <u>unbroken</u>. The rest of the class participated actively in giving other words which could serve as similar examples.

8. Some Facts About Nouns

This section is concerned with the history and development of nouns. It is an attempt by the author to include historical linguistics as well as semantics. Following the lesson on obsolete words, the investigator found on the return visit the following week several articles such as curling tongs, sadirons and even a washboard which students had brought. This seemed to indicate that the material in the book was holding their attention and interest to the extent that they wanted to share their experiences with other members of the class.

Several exercises from this section were given for homework; for example, students were asked to prepare short reports on the words taken from Greek mythology. The following day they gave their reports. One entry in the anecdotal record of the lesson was "Great interest."

There was considerable discussion while this section was taken. Students frequently gave new words that they had gathered from their reading. A line from the anecdotal record will illustrate the situation: "It's surprising how interested students are in just words."

The only area in this section that gave some difficulty was the one on acronyms. Acronyms such as <u>WAVES</u>, <u>WRENS</u>, <u>WAACS</u> were not used by the students. When they questioned their parents they discovered that most parents

had forgotten what these letters stood for. Either those particular acronyms should be deleted or included only to show students how some expressions enter the language, live for a brief period, and then disappear. Many slang expressions follow this pattern.

9. Verbs

The key principle in this chapter was the recognition of verbs. The paradigm of the verb ⟶ tense + stem was another attempt at transformational grammar. Although one or two students did not seem to understand what was involved in this exercise, most of them seemed quite at ease at handling the transformations. This approach is quite different from the traditional approach where the verb was defined as an action word. Some students pointed this out and stated they now understood something that they had merely memorized before.

10. Agreement

It seemed to this investigator that this section was quite comprehensive. Students came to their own generalizations about agreement in sentences such as "The boy runs" and "The boys run" by noting that: "The verb in the present tense always agrees with its subject."

Several interesting points arose during a discussion of the verb be. One student observed that she couldn't understand why traditional grammar defined verbs as action words or state of being when the verb be did not seem to belong to either category. This was an insight that seemed very mature. Some present day grammarians are of the same opinion for they are not classifying be in the verb class. Roberts has stated that: "Be in its

various forms, (is, were, etc.) is just be."[1]

In the paradigm of the verb be, the author, without any explanation, put auxiliary where he had formerly used tense. The symbols V P—> aux + verb instead of the now familiar V P—>tense + verb provoked numerous questions. One student came to the conclusion that the auxiliary always indicated the tense, past or present, by certain affixes added to the stem verb. On the basis of this type of evidence, it seems that the author must have given considerable thought to the kind of practice that might lead to discovery. Students seemed to be led naturally to discover principles of the language structure.

11. Recognizing Verbs By Their Position

The test frame The x could _____ (the y.) was helpful to the students in that they could quickly decide which word functioned as a verb by fitting it into the blank. They did not seem to have any difficulty in recognizing transitive, intransitive, and linking verbs. This type of recognition was usually the result of much drill when it was taught in traditional grammar. Because they were now accustomed to look at the structure of the sentence, they were able to pick out the verb types by looking at what came before or after the verb.

12. Recognizing Verbs By Signal Words and by Their Forms

Modal was another new term which the students had not used before. Roberts has observed that modals were sometimes called modal auxiliaries but he thought that the terminology was confusing and that it would be simpler

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[1]Paul Roberts, English Syntax, (New York: Harcourt, Brace & World Inc., 1964), p. 39.

to refer to them just as modals.[2] The manuscript used the paradigm as a teaching device for modals. The students found that transformations such as "might go⟶ past + may + _____" were not too difficult. However exercises such as "should speak⟶ _____ + _____ + _____." which required a few more transformations were found to be relatively more difficult. Students were told by the investigator that they need not be too concerned about not understanding this concept, which was introduced before, for it would be discussed again and again in the manuscript. The manuscript showed evidence of the author's concern for reinforcements of difficult concepts and this type of concern seemed to give students confidence.

13. Adjectives

The work on adjectives began on January 5, 1966. The atmosphere continued to be informal with the desks arranged in a more-or-less horseshoe design with students facing each other. This type of seating arrangement was not used every day, as there were other variations from time to time.

Traditional grammar defines an adjective as a word that modifies a noun. The word <u>modifies</u> confuses many students as they have indicated that they do not understand what it really means. Owen Thomas has remarked that:

> If one could develop some syntactic way of defining the word "modify" then perhaps we could utilize these definitions with a few minor changes in a transformational grammar of English.[3]

Structural grammars usually used the term "pattern with" instead of modify. "Modify" is not used in this manuscript. Instead adjectives are

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[2]<u>Ibid</u>., p. 21.

[3]Owen Thomas, <u>Transformational Grammar and the Teacher of English</u>, (New York: Holt, Rinehart and Winston Inc., 1965), p. 151.

defined as words that can most easily fit into the following test frame: The x is very _____ . The approach seemed simple for the students. Within a relatively short time they were giving many examples. There was an active discussion about such examples as "He is very conceited," "He is very embarrassed," and "He is very determined." They observed that even though conceited, embarrassed and determined looked like verbs and were often used as verbs, they were adjectives in these sentences. The investigator felt that this kind of reasoning showed real understanding. This concept was often one of the most difficult to teach in the traditional grammar approach as most students would insist that such words were verbs in any context.

The word very preceding the adjective in the test frame proved to be a helpful device. For example, in a discussion about such words as jumping, interesting, the class concluded that only interesting was an adjective as jumping in the test frame did not sound grammatical. Another new term was introduced when qualifier was applied to very. In subsequent discussions the class showed particular interest in such qualifiers as mighty, pretty, darned. Most of the students stated that they used these words often. They were pleased and surprised that these words, which they said were used by many people, were included in the manuscript. They noted that they did not recall any other English book discussing them. However, they did agree that although such words were used in actual speech they should not be used in literary writing.

14. Recognizing Adjectives by Changes in Form

The lesson on degree was one of particular interest in this study. Words such as red, perfect, dead, and round were introduced for discussion. Questions such as "Can one circle be rounder than another?" were the

beginnings of a heated debate. One student suggested that he would like to
hear his mathematics teacher's opinion about a "rounder circle." He reported
the following day that he had discussed it with two mathematics teachers.
One teacher had said that: "Definitely not - one circle cannot be rounder
than another." The other teacher proceeded to illustrate on the blackboard
how one circle could be rounder than another. The notion that there could
be differences of opinion about the same terms was a thought provoking one.
To conclude this discussion, one of the boys remarked that words such as
deader, more perfect, and rounder could be used and used correctly "depend-
ing on the kind of communication made." This kind of revelation of the
depth of understanding about the spoken language surprised the investigator.
An excerpt from this lesson indicated that: "Pleased and surprised! Stu-
dents are really ready for deep discussions. Too often we underestimate them."

Perhaps the only lesson on adjectives that caused some problem was the
one on using commas with two or more adjectives. Only twelve of the thirty
students indicated that they found the exercise comparatively easy, while
the remaining eighteen could not put the commas in the correct place. How-
ever, if they read them aloud they were soon able to see where the commas
should go. This seemed to prove the "indisputable fact that speech is the
underlying reality of which writing is a secondary symbolization."[4]

15. The Adverbs

Most traditional grammars define nouns and verbs semantically, that
is, by what they mean. Adverbs and adjectives are defined syntactically,
that is, by what they do. For example, an adverb is said to modify a verb,

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[4]Roberts, op. cit., p. 12.

an adjective, or other adverb. This manuscript states that "the word adverb may be easy to remember if you assume that adverbs usually add meaning to a verb answering such questions as when? where? how?" The test frame "The x came _____" was easy to remember. Another suggested testing device were the words then, thus, there. Sledd[5] had originally used them as a testing device when he wrote his book on structural grammar. The investigator thought that the sentence "The boy wrote a test _____" was one which fit very closely to the interests of this age group. They filled the blank with adverbs which seemed to be meaningful to them: unnecessarily, dejectedly, unwillingly, untidily. There was much laughter and it must have been apparent to all in the room that there was nothing artificial about this grammar.

In one lesson, the sentence "The man runs home" became a basis for discussion. Some thought that "home" was a noun. One of the boys, who rarely participated made the following observations: "If you put a determiner in front of home you change the meaning of it for then we would have a sentence which would read 'The man runs the home.' Home cannot be a noun in this sentence and it has to be an adverb of place." With this conclusive evidence, the boy seemed to have won a new confidence in himself. All agreed that he was correct.

The concept that a subject complement could be an adverb was a new concept. Most grammar books overlook such constructions as "Your brother is here." Dashwood-Jones[6] in Patterns for Writing acknowledges that both the

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[5] James Sledd, A Short Introduction to English Grammar, (Chicago: Scott, Foresman and Company, 1959), p. 95.

[6] D. Dashwood-Jones, Patterns for Writing, (Toronto: W.J. Gage, Limited).

noun and the adjective could be used as a subject complement but does not mention the adverb. Baker in Words and Ideas stated that "predicates have their meanings completed by nouns, pronouns, or adjectives known as complements".[7] On the basis of this, one can conclude that this manuscript made an attempt to remedy some of the inconsistencies that exist in school grammars.

One exercise helped to point out to students that some statements which they had been taught as incorrect were actually correct and accepted as good English. This exercise noted that a number of adverbs have two forms, either of which could be used. The most common ones were deep, deeply, cheap, cheaply, slow, slowly. Most students admitted they used "Drive slow" but they had a feeling that they were not using good English. Students who insisted that road signs which read "Drive slow" should read "Drive slowly" changed their opinion after class discussion of the ideas presented by the manuscript.

Some of the exercises on the adverb were not taken up in class as it was felt that the students had demonstrated a good understanding of the adverb form and its relationships in the sentence pattern.

16. Substitute for Form Class Words

This chapter touched upon pronouns: personal, compound personal, and indefinite pronouns as substitutes for determiner-plus-noun. It was an attempt at the sequential development of the noun phrase and as such it was a preparation for the branching tree in subsequent chapter which read NP $\longrightarrow$ determiner + N, or $\emptyset$ + proper noun, or $\emptyset$ + personal pronoun or $\emptyset$ +

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[7]Harold S. Baker and Charles H. Campbell, Words and Ideas 3, (Toronto: W.J. Gage and Company Limited, 1953), p. 104.

indefinite pronoun. This chapter presented the many facts necessary upon which to build a foundation for understandings of concepts and relationships in the branching tree.

In one of the discussions that took place during this period, students made the interesting revelation that they probably used "I" more than any other subject. The girls thought that they probably used "he" quite often. The boys, however, noted that they seldom if ever used "she" as the subject of their sentences. The humour in these revelations escaped no one.

17. Prepositions

This was a lesson which seemed well developed and systematic. Since it was felt that much time could not be spent on it, it was covered rather rapidly. A brief test on structure words concluded the chapter. The test seemed to be based on the point of view that learning about grammatical structure was a matter of reinforcements of concepts previously learned.

18. Kernel Sentences and Kernel Strings

Studies on this chapter began on February 4, 1966. The introduction "Trillions of Sentences" seemed to be very appropriate to junior high school students. The notions that "You are a sentence generator" and "You could, if you had to, produce hundreds of billions of sentences" seemed to fascinate them. They were ready and eager to begin their studies on what they seemed to consider the most exciting aspect of language.

There is no real definition of a kernel sentence, only the simple fact that it is made up of a noun phrase (NP) and a verb phrase (VP) with the NP being the subject of the sentence and the VP being the predicate. Some of the students observed the close tie between this description and traditional grammar.

The information given in the manuscript was always illustrated by a branching tree diagram. At first the tree looked very simple but it became more and more complicated. It soon became obvious that the tree diagram was a very useful learning device. Students were intrigued by it. Once their curiosity was aroused they were anxious to understand it and to apply their new knowledge to generating sentences. The following is a statement taken from one of the anecdotal records:

> They seemed to be very pleased as well as very surprised when they could do these exercises. But what is more surprising is that they could do them well--better than either they or I had anticipated.

It must be pointed out that in this section the technique of presentation had changed somewhat from the original presentation. The pace was slower; there were more questions asked; and students were frequently sent to the blackboard to illustrate the sentences they had generated. It was felt that the nature of the material, sometimes described as "esoteric and forbidding"[8] called for more careful study. It was not long before the investigator discovered that the students were not finding the work difficult, but to insure a logical and systematic development the intensive study was continued to the end of the investigation.

Students were quick to understand the concepts introduced. Although they had learned formerly that a phrase referred to a group of words, it did not seem odd to them that a noun phrase could be used for single words such as John, He, Someone. The symbol $\emptyset$, meaning "nothing" enabled them to understand this different concept of the noun phrase. Roberts justified the use of the symbol $\emptyset$ by stating that "it permits us in the end to achieve a

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[8]Thomas, op. cit., p. 1.

simpler grammar--i.e., one which generates more sentences with fewer rules."[9]

To most students the term auxiliary verb had meant helping verb. However, in this grammar the auxiliary included tense as well as modal. This was explained and illustrated carefully by the branching tree. Students were soon able to reproduce their own branching tree and they seemed to understand what they were doing.

Their first efforts at generating kernel sentences based on kernel strings were rather juvenile. The sentences seemed to be limited to a restrictive vocabulary based primarily on cats and dogs. They soon caught on to generating sentences based on a particular thought or pet theme. One of the students began this trend by giving a sentence based on the monster theme. His rather gruesome sentences provoked both laughter and shudders; nevertheless, from this point on, the sentences became interesting.

The distinction between the verb be and the linking verb were noted in this lesson. This special treatment of the verb be seemed to follow Roberts who had observed that "be's behavior is special and must be described differently."[10] Students were of the opinion that this was a sensible approach and that they could henceforth cope with the verb be. During the many years of grammar teaching the investigator had found be a problem. Making a special place for it seemed to put it in its proper perspective.

When work was begun on the modals, it was found that review was necessary as some students had forgotten the five modals which were introduced in the chapter on "Verbs." What puzzled the students was that there were

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[9]Roberts, op. cit., p. 20.

[10]Ibid., p. 20.

only the five modals: will, shall, can, may, and must. It was pointed out that the manuscript did not include all the modals; for example, dare, need and ought, sometimes display partial modal behavior. It was also pointed out that no book or manuscript could be complete in its description of the language for language was a living thing and was constantly changing. One student made the observation that what the manuscript seemed to be doing was describing the way the language works, that is, "its operation." The investigator thought that the student had explained it as well or better than the investigator might have. It is important to note that many observations made by the students were often of surprising depth. They seemed to have more and more of an understanding of the language as a system as the investigation continued. It almost seemed as if at times they understood by intuition.

One aspect of the book puzzled some students. They questioned the relevance of discussing be-ing prior to have-en when the branching tree diagram showed it thus: Aux──→tense + (modal) + (have-en) + (be-ing) + verb. A student observed that be-ing was easier to learn and that is probably why the author decided to discuss it first. They all agreed that this was a very likely deduction. It is interesting to note that the investigator discussed this with the author who stated that he had put be-ing first for the very reason the students had said he had.

The conclusions that may be drawn from these anecdotal records, and some of the implications for further study are discussed in Chapter V.

II. ANALYSIS OF THE INVESTIGATOR'S EFFECTIVENESS INSTRUMENT

Some idea of the investigator's appraisal of the manuscript from the point of view of its teachability is presented in Table I. The mean scores

TABLE I

MEAN SCORES OF CRITERIA ON TEACHABILITY OF THE MANUSCRIPT

1.	Does the lesson have explanations which are readable and comprehensive?	4.87
2.	Does the material in the lesson hold the students' attention?	4.80
3.	Does the lesson fit as closely as possible the readiness of the students for whom it is intended?	4.87
4.	Does the lesson make it possible for students to acquire emotional attitudes and skills of group membership through oral verbalization?	4.37
5.	Does the lesson formulate explicit and transferable generalizations?	4.70
6.	Does the lesson provide questions which call for the use of generalizations under realistic conditions?	4.70
7.	Does the lesson provide for practice in application either by suggesting activities or posing sensible questions?	4.70
8.	Does the lesson help the students see the intended outcome of their work?	3.80
9.	Does the lesson provide for reinforcements of grammatical concepts previously learned?	4.88
10.	Does the lesson provide a systematic and logical development of the structure of language?	4.97

were derived from a tabulation of criteria ratings on each of the thirty lessons.[11] The ratings used were as follows: not effective (1); not very effective (2); effective (3); quite effective (4); very effective (5).

The criterion, most effectively represented in the manuscript, was that concerning the systematic and logical development of the structure of

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[11]Appendix B.

the language. Placing second, the criterion on reinforcements of previously learned concepts was also very effective. It may be worth noting that the means for the criteria on "readability" and "suitability" were the same. Both were rated very effective. The criterion concerning provision for students' interest was also rated very effective. The three items concerning the provision for conceptual learning were rated very effective, with all tied at the same mean. Although the criterion on provision for oral verbalization was rated slightly lower than some of the others, the difference was not significant; it was rated "quite effective," slightly below "very effective." The least effective criterion was that concerning provision to help students see the intended outcomes of this work. The rating on it was quite effective. It might be pointed out that perhaps the reason for this item being rated least effective is that it probably is not possible for any book to develop this criterion very effectively. Although Cronbach[12] had suggested the inclusion of this criterion for evaluation of textbooks, he had also noted that no textbook could satisfy all criteria.

The over-all mean for the ten criteria of 4.66 indicates that the teachability of the manuscript was considered by the investigator to be very effective.

III. ANALYSIS OF THE OBSERVER'S INSTRUMENT

The statistical analysis of the observer's instrument was directed toward discovering:

1. The total number of responses concerning facts, in relation to the

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[12]Lee Cronbach, ed., Text Materials in Modern Education, (Urbana: Illinois: University of Illinois Press, 1955), pp. 180-181.

total number of responses concerning generalizations, relationships, and applications.

2. Whether the number of student responses had any correlation with the degree of their understanding of the material in the manuscript.

1. Analysis of Types of Responses

Table II summarizes the percentage of fact responses and the percentage of the combined generalization, relationship, and application responses of the total number of responses for each of the thirty lessons. This data illustrates the raw scores in Appendix F.

Because one of the basic assumptions underlying the design of the study was that in order to attain insight into the structure of a subject, the accumulation of facts serve as the foundation for the subsequent hierarchial formation of generalizations, relationships, and applications the responses for the latter three were combined to produce the total in the higher mental processes column. The last column reveals the total number of responses for each lesson for all the students, the number of whom varied from lesson to lesson because of absenteeism. This table indicates that the students made a significant number of responses for each lesson during the forty minute periods.

The graph in Figure 1 has been derived from the data in Table II. The moving averages method,[13] in which five successive points in the original data were averaged, was used to smooth out the irregularities so that a trend would be exhibited. The graph reveals, that as the lessons began,

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[13] J. F. Kenney and E. S. Keeping, Mathematics of Statistics, (Princeton, New Jersey: D. Van Nostrand Company Inc., 1954), p. 221.
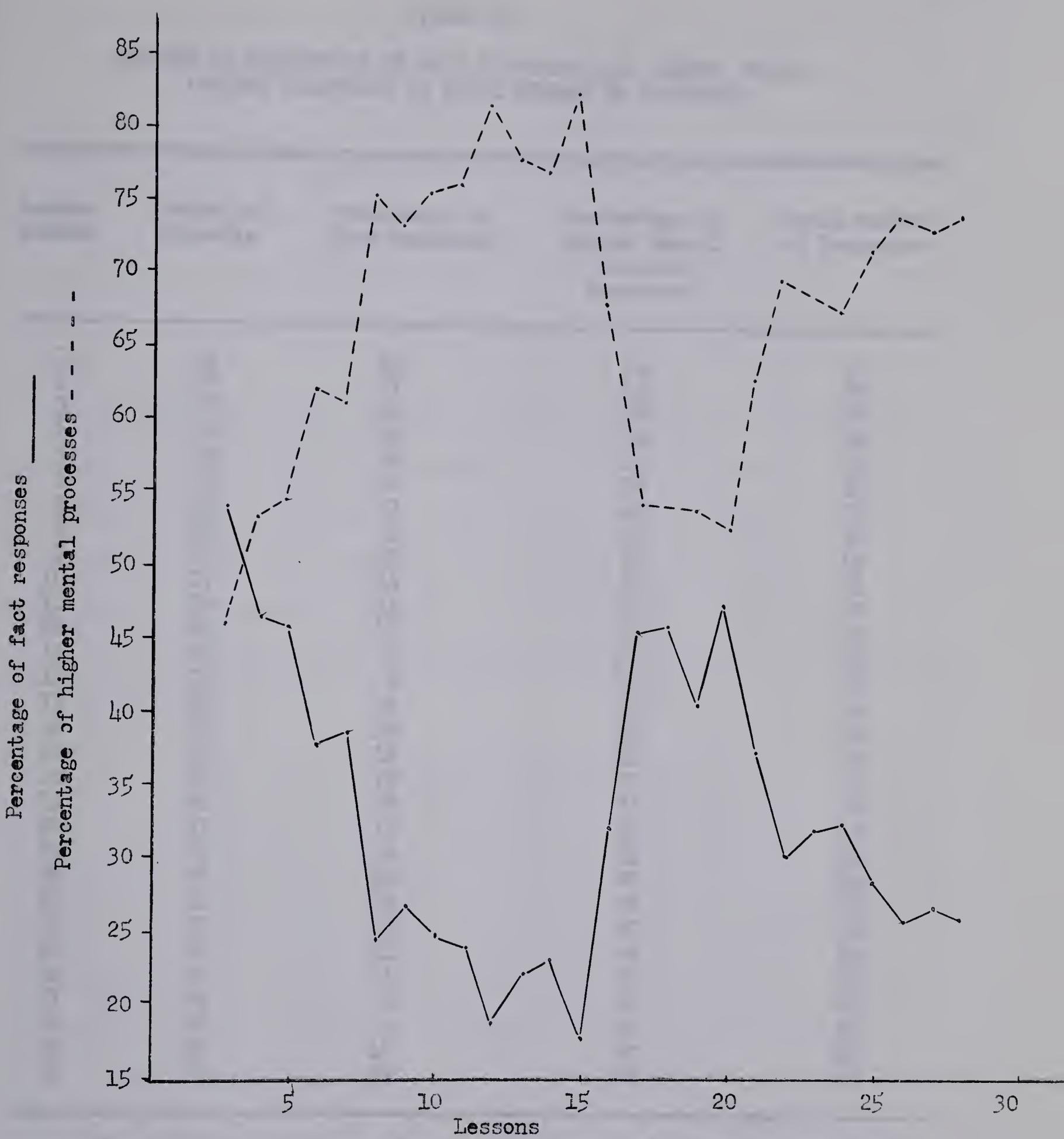
FIGURE I

TRENDS OF OBSERVED STUDENT RESPONSES

TABLE II

SUMMARY OF PERCENTAGE OF FACT RESPONSES AND HIGHER MENTAL PROCESS RESPONSES TO TOTAL NUMBER OF RESPONSES

Lesson Number	Number of Students	Percentage of Fact Responses	Percentage of Higher Mental Process Responses	Total number of Responses
1	28	59	41	54
2	27	57	43	35
3	27	44	56	36
4	28	24	76	50
5	29	86	14	35
6	28	22	78	63
7	27	53	47	57
8	26	4	96	27
9	28	29	71	59
10	27	14	86	58
11	29	33	67	39
12	28	43	57	83
13	26	0	100	48
14	26	2	98	48
15	25	31	69	36
16	26	38	62	56
17	25	16	84	50
18	28	73	27	26
19	28	69	31	32
20	17	33	67	49
21	28	39	61	54
22	28	22	78	36
23	28	22	78	55
24	27	35	65	34
25	28	41	59	69
26	27	41	59	75
27	28	2	98	44
28	28	9	91	75
29	25	40	60	42
30	26	38	62	68

The combined responses of generalizations, relationships and applications are here indicated as higher mental processes.

students responded more frequently by stating facts, but as the lessons progressed they responded more and more frequently in terms of the higher mental processes. However, the trend is interrupted in the Lesson 15 to 20 cluster where it exhibits a rise in fact responses and a decrease in higher mental process responses. It might be pointed out that there could be several factors which contributed to the reversal of the trend at this point. Several of these lessons, particularly Lessons 18 and 19, were covered quickly in order to begin the work on kernel sentences and kernel strings. Moreover, the beginning of the new concepts on generating sentences probably necessitated the development of an accumulation of facts necessary for higher conceptual learning. At any rate, the graph indicates a sharp rise in the higher mental process responses and a decline in fact responses as the study on generating sentences continues. On this basis one can conclude that the trend indicates that students were developing an insight into the structure of the language.

2. Analysis of Number of Student Responses

As part of the study, the investigator wished to determine whether the number of students' responses correlated with the degree of their understanding of the language. Only the last ten lessons were tabulated,[14] and were used as the source of data for the analysis in Table III. They were selected because they contained transformational grammar concepts.

The students were given a rank order according to the number of responses they made as shown in the second column. They were also given a rank order according to their observed degree of understanding of the material

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[14]Appendix C.

presented. The observer and the investigator cooperated to determine this
rank order shown in the third column. Table III gives each of the 28 stu-
dents' scores on the two scales. Student 18 was not considered in this analy-
sis because he was unavoidably absent during the ten lessons for which the
observations were made.

TABLE III

RANKS ON STUDENT RESPONSES AND TEACHERS' EVALUATION OF STUDENT UNDERSTANDING

| Student | Rank | | d_1 | d^2 |
	Pupil Responses	Teachers' Evaluation of Pupil Understanding		
1	9	14	-5	25
2	23	25	-2	4
3	6	10	-4	16
4	4	13	-9	81
5	10	15	-5	25
6	28	24	+4	16
7	11	9	-2	4
8	23	23	0	0
9	19	19	0	0
10	14	5	+9	81
11	16	20	-4	16
12	17	17	0	0
13	17	22	-5	25
14	15	21	-6	36
15	19	16	+3	9
16	3	6	-3	9
17	26	26	0	0
18				
19	22	27	-5	25
20	23	18	+5	25
21	13	3	+10	100
22	2	2	0	0
23	5	11	-6	36
24	25	28	-3	9
25	11	12	-1	1
26	1	1	0	0
27	19	7	+12	144
28	7	8	-1	1
29	7	4	+3	9
			$\sum d_1^2$	= 697

$$r_s = 1 - \frac{6(697)}{(21852-28)} = 1 - \frac{4182}{21824} = 1 - 0.19 = 0.81$$

The Spearman[15] rank correlation formula was used to correlate student responses with the teachers' evaluation of their understanding. Although there were a number of ties, it was felt that it was not necessary to make the correction for them as there is a relatively insignificant effect of ties upon the value of the Spearman rank correlation.

The high correlation of 0.81 seems to verify the assumption made earlier in the study that the principal effects of knowledge can be observed by performance of verbal responses.

It seems reasonable to conclude that the manuscript has effectively provided for student responses so that students, through verbalization, can develop concept formations.

IV. INFORMATION RELATED TO STUDENTS' INTEREST QUESTIONNAIRE

Twenty-four students participated in this questionnaire. Since the questionnaire was of an informal nature designed to illicit comments and opinions from the students, the written statements were not compiled in the usual manner. Instead students' opinions, as well as excerpts from their written comments are presented.

1. Self-Evaluation of Change in Knowledge About Language Concepts

All students answering the interest questionnaire indicated that they knew more grammar now than they had at the beginning of the study. Only two of them felt that though they knew more grammar now, they were still hesitant about their knowledge. One student indicated that "there were some sections

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[15]Sidney Siegel, Monparametric Statistics For the Behavioral Sciences, (New York: McGraw-Hill Book Company Inc., 1956), p. 210.

that I am still hesitant about though I'm quite confident about most sections." The others indicated that they were confident in their knowledge.

2. Students' Attitude and Interest

All students stated that they liked the new course on grammar. One student stated that she would also like grammar in the traditional way. Students in general agreed that they liked the course because it was more interesting and more fun. One student expressed his opinion in this manner: "I used to think language was a bore. This year language has really been fun." Another student commented: "This book was not boring like other language books probably because it was more interesting."

Although some students did not indicate whether they had more interest in language matters generally, one student who did comment on it said: "I never was interested in language but I am now."

All students commented on their general approval of the oral work. Only one student said that although he liked taking this grammar orally, he was "frightened at first." Another student remarked that he liked taking it orally "not because I didn't want to do the work but because I can understand it better."

3. Students' Appraisal of Manuscript

There was a heavier response for this section of the questionnaire. Six students found the work on nouns and verbs the easiest. Two indicated that they found the adverbs the easiest while another two thought that the adjective was the easiest to learn. Six students thought that the concepts about kernel sentences and kernel strings were the easiest to learn. Eight students did not consider this question.

Quite often it seemed that what students thought was easiest they also liked best; however, this was not always the pattern. Fifteen students emphasized that they liked the section on kernel sentences and kernel strings best whereas only six of them thought that it was the easiest. One student indicated that she liked this section the best even though she found it the hardest. Five students thought that they liked the sections on nouns and verbs best.

There was quite a variation of opinion about concepts which they found hard. Four students found the concepts about kernel sentences and kernel strings the hardest, while five found the prepositions the hardest to understand. Three expressed their concern about the adjective, the transitive and intransitive verb, and the branching tree. One student stated that "There was nothing really hard but I thought that kernel sentences were going to be hard, though they weren't." Another indicated that "there was nothing really hard about it."

More students indicated their dislike for the section on the substitutes for determiner-plus-noun than for any other section. Three students noted that they like kernel sentences least. Other disliked items were the branching tree, and the adverbs.

Not all of the twenty-four students had suggestions to make. A few students thought they would like to see pictures or cartoons included in the manuscript. One student thought that the section on kernel strings and kernel sentences should be longer and should be "closer to the front." Two thought that it would be advisable to include more pages on generating sentences. One thought that the exercises should be structured on different subjects. There were no adverse criticisms.

The following illustrate some of the comments made by the students:

Student 5:

No, I'm sure I did not know grammar very well before. But I think this book made me understand grammar a lot more. I understand it very well and every bit of it. I liked the course because it was very interesting, and it helped me a lot. I liked taking it orally because I understood it better, and if we had taken it in the traditional way I would not have understood it. I did not find anything hard. What I found easy was the nouns and verbs. I found the kernel strings and the kernel sentences the easiest. My suggestions are to get this book published as fast as possible and get them distributed all over.

Student 26:

I feel I didn't know grammar well before we started, however now that we've finished I feel I know it better. I am quite confident about this knowledge. I like the course very much. I personally liked the course to be taken orally. I am more interested in language in general. I didn't find anything very hard. The sections I liked best was the one on kernel sentences and strings. I liked the section on substitutes least. I think you should structure exercises on various subjects (e.g., Science, History).

Student 27:

Before your course started I was unaware of myself and a little confused about grammar, but now I think I understand it a lot better. It seems to make more sense, and I am more sure of myself. I liked the course very much because it was presented in an interesting way and it made sense. I liked taking the course orally because I think I understood it better. I would not have preferred the traditional method. I am now much more interested in language in general because I understand it better and it makes more sense. I think I found the section on adjectives and adverbs a little hard at first. I think I found the whole course much easier and clearer than I had expected. I found the sections on kernel strings most interesting. I have no suggestions because the book makes sense the way it is.

There are several factors that have been revealed by the students' interest questionnaire:

1. The manuscript has effectively held the students' interests.

2. Students approve of the eclectic approach to grammar.

3. Students like abundant opportunities to think and to talk about the language.

4. Students feel that they understand grammar better.

5. Although quite a number of students indicated that they liked sub-
stitutes for   determiner-plus-noun   least and also found this section the
hardest, it might be pointed out that this section was one which was
quickly covered because of the lack of time.

CHAPTER V

SUMMARY, CONCLUSIONS, AND SUGGESTIONS

I. SUMMARY OF MAIN FINDINGS

A manuscript based on an eclectic approach to the teaching of grammar was used by the investigator on an experimental basis in junior high school in order to determine the problem involved in teaching it to students by a teacher who is not a trained linguist. The investigation also attempted to find information about the manuscript in respect to the following: whether it provides a systematic and logical development for students' understanding of the structure of the language; whether it provides for student responses so that students can be led to verbalize grammatical facts, generalizations, relationships, and applications, and in so doing, attain insight into the subject; and whether it holds the students' interest.

The 29 students of a Grade VII class were observed in their performance on verbal responses, production of new knowledge and overt behavior. These observations were recorded in anecdotal records and on an observer's instrument. They were used as a basis for evaluation on an effectiveness instrument. A students' interest questionnaire was given at the end of the investigation.

The main findings of the investigation may be summarized as follows:

1. The anecdotal records pointed out relevant factors concerning the materials on the eclectic approach to grammar. The records speak for themselves concerning the success of this approach, the inductive method used, the provision of practice for discovery, the provision for reinforcement of grammatical principles and the areas of difficulty encountered.

2. The effectiveness instrument revealed that the over-all mean for the criteria on the teachability of the manuscript was 4.66 out of a possible mean of 5.0. This indicates that the investigator found the manuscript very effective.

3. The observer's instrument indicates several factors:

(a) The tendency was for students to give more responses concerning facts rather than those concerning higher mental processes at the beginning of their studies on new concepts. This is apparent at the beginning of the investigation and at the beginning of the lessons on generating sentences. However, as the study continued there is a continuous increase of higher mental process responses and a decrease of fact responses. There were several lessons, particularly Lessons 18 and 19, that did not follow the general trend.

(b) The total number of student responses and their estimated degree of understanding had a rank order correlation of 0.81.

4. The students' interest questionnaire indicated that students felt they had improved in their understanding of the language, that they are interested in the study of the language as developed in the manuscript, and that they generally approved of the material, in particular, the latter section on generating sentences.

II. CONCLUSIONS AND IMPLICATIONS

The first question with which the investigation was concerned was whether or not the manuscript was teachable. The findings indicate that the manuscript can be effectively used by an ordinary teacher in an ordinary classroom. It might be pointed out that although the investigator had

training in traditional and structural grammar, she had none in transformational grammar. All that seemed to be necessary was to read the manuscript through before the investigation began, and then, to read the lessons before they were taken in class. There was little preparation necessary, as the material was so arranged that it was easy to understand when one took it up with the class. In other words, the teacher learned with the students. It is true that in the more familiar sections which were centred mostly on structural grammar, she did not adhere as rigidly to the materials and would bring up other examples, depending, of course, on the type of discussion that was taking place. It therefore seems reasonable to say that the more familiar a teacher is with all the material in the book the more she is likely to modify or add or delete to accommodate a situation, an individual, or a group, and thus personalize the instruction more.

The fact that all the mean scores of the criteria on the teachability of the manuscript are close to each other, (3.80-4.97) and all fairly high, with no mean score significantly different from each other, would suggest that the manuscript has satisfied all the criteria which were felt to be important in textbook evaluation.

This finding has implications for planners of new curricula and new programs. It would seem that it is necessary for planners to insure the teachability of any material by trying it out first on an experimental basis. Features in the material which can likely contribute significantly to its teachability are the organization of a content which is readable, comprehensive, suitable to the age group for whom it is intended, and a systematic coherent whole. Furthermore, the material should aim at the inductive method.

The second question to be answered by the investigation was whether the manuscript provided for a gradual development of students' understanding of the language. The findings indicate that, except for a few lessons, students were attaining insight into the particular theory of grammar that they were studying. This would seem to confirm the assumption as stated in Chapter III that insight, which can be taken to be an understanding of the underlying structure of the subject, can be attained through a hierarchy of knowledge, proceeding from fact to generalization to relationship to application—the latter three termed higher mental processes.[1] However, there remains the problem of Lessons 18 and 19 that did not follow the trend. What was so different about these lessons? Was there an inadequacy in the presentation?

Perhaps, one of the reasons for the apparent non-conformity of these lessons was that, as has been stated previously in Chapter IV, the lessons on pronouns and prepositions, known as "Substitutes for Determiner plus Noun" were covered hurriedly to make more time for the section on "Kernel Sentences and Kernel Strings." It therefore, seems reasonable to conclude that in order for students to be led to higher conceptual learning, they need time to integrate, to reorganize, and to reinterpret the accumulated facts they have in their possession. It is also likely that some lessons were structured more for the purpose of presenting many facts to be used as the foundation in forthcoming lessons. In view of the fact that there was a decrease in the higher mental process responses at the beginning of the investigation and also at the beginning of the section on Kernel Sentences

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[1] Richard C. Anderson and David Ausubel, Readings in the Psychology of Cognition, (New York: Holt, Rinehart and Winston Inc., 1965), p. 3.

and Kernel Strings this is a very possible conclusion.

In the light of the forementioned conclusions, the implications for teaching is that materials for classroom use should be planned to make the maximum contribution of one section to the other, yet each section should be a coherent understandable system. As has been pointed out in the literature section, grammar in the past, centering its attention on isolated details has suffered from disconnectedness and diffusiveness. There should, there- fore, be close attention to the most basic central principles so that the details are always closely related to the fundamentals. Furthermore, the material must be presented in a manner whereby students are given time to think about the presented facts in order to understand.

The third question considered in this study was whether the manuscript provided situations for student responses so that there was opportunity for orbal verbalization to assist students in concept formation. The findings indicate that the students who made the most frequent responses also seemed to have the best understanding of the language. These findings seem to con- firm the assumption stated in Chapter III that the principal effects of knowledge can be observed by verbal responses. If this assumption can be taken to be correct, then, it can be concluded that the manuscript has pro- vided material with a variety of instances of concepts which guides students in identifying and attaining these concepts by verbalization and which leads them to understanding.

Implicit in this conclusion is that language materials should provide numerous oral exercises so that much of the work on language can be centered on actual speech. Another implication is that materials should be so struc- tured that students can be led to raise questions, to seek answers, and to

think objectively about their language.

The fourth question to be answered in this study was whether the manuscript held the interests of the students concerned. In view of the fact that the students' interest questionnaire indicated general approval of the manuscript, it can be concluded that the eclectic approach to grammar has effectively held their interest. It also seems reasonable to conclude that it is not simply the content or the method but also the attitude towards grammar which effected the needed rehabilitation from the students' first expressed boredom to their final affirmation of interest. Their preference for this course, rather than one based only on traditional grammar with which they had some familiarity, would indicate that their attitude had probably changed because they found this course had more meaning to them. The implications for teaching is that grammar should be approached inductively against a background of a broad set of fundamental principles in order to improve students' understanding and consequently their attitude.

Other possible implications arising out of the aforementioned conclusions and the relevant information in the anecdotal records appear to be:

1. Grammar should be related to the social content. The ways in which language patterns vary from person to person and from situation to situation are crucial to a basic understanding of language and its function.

2. The historical dimensions of language should be examined in language classroom materials. Because language changes, a view that the language is static can never serve as a basis for understanding the nature of language.

3. Much of the terminology might be the same as in traditional grammar. It should not depart unnecessarily from that already known by the student. For example, there seems little to be gained in using Class I and Class II terms in place of nouns and verbs.

4. Grammar should be functional, not in the sense of selecting only those parts that are directly useful, but in the sense of centering attention on the phenomena of language and their functions.

5. Grammar should be structural so that students can see language as a system or structure where the parts are interrelated to make up a complex whole.

6. Grammar should be transformational so that students can come to an understanding of the often deeply buried mechanisms that hold together the countless numbers of possible English sentences. With this understanding will come a sense of grammaticality.

On the whole then, this investigation has demonstrated that the manuscript centering its attention on the eclectic approach to the teaching of grammar has proved to be effective for both teacher and students. As has been mentioned earlier, there are several areas which might be deleted and reorganized, yet the manuscript has demonstrated that it is coherent, systematic, and logical. It has also proved that a change in the teaching of grammar can be effected in a junior high school classroom.

III. SUGGESTIONS FOR FURTHER INVESTIGATIONS

Certain implications of this study suggest other investigations which might be conducted:

1. The last item with which this investigation was concerned was whether generating sentences in the transformational theory of grammar could be understood by Grade VII students. A similar investigation might be undertaken to determine whether Grade VIII students can learn sentence transformations.

2. Other investigations might attempt to determine whether an eclectic approach to grammar has some relation to the students' ability to write. Although there have been research experiments based on traditional, structural, and transformational grammar, so far as this investigator is aware, there has been none on the relationship of an eclectic approach to grammar and writing ability.

3. Several classrooms in several areas of a school system or a province could repeat this study, or similar ones. It would be desirable to know how other students and other teachers react to the materials in this manuscript.

4. Investigations might be made to determine the applicability of any new program of text material before they are authorized for a school system.

The investigation was a tentative approach to the problem of effecting a change in the teaching of grammar in junior high schools. Although structural grammar has been proposed for some school systems, there has been little attempt to offer students any materials on transformational grammar. In writing this manuscript, the author was aware that perhaps one of the reasons for the exclusion of the transformation theory of grammar was that many teachers did not feel it is suitable for classroom use. This manuscript has demonstrated that, not only was it suitable for classroom use, but it also was one theory which most effectively held the students' attention and interest. Perhaps further investigation such as some of those mentioned above might discover other factors about transformational grammar in the junior high school classroom.

It is possible that greater objectivity can be achieved in future investigations if one of the following procedures are used:

1. Instead of one, several observers might record their observations on an instrument similar to the one used by the investigator in this study.

2. A number of observers, using an instrument similar to the observer's instrument used for this investigation, might record student responses.

3. Several observers might be watching through a one-way screen.

4. Tape recordings of lessons, which can later be analyzed, might be used.

5. Personal interviews with students might be held.

6. There might be a control group using another text, and a test-retest procedure which would use tests designed to evaluate the achievement of objectives which the experimental text aims to achieve.

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APPENDICES

APPENDIX A

SCHEDULE OF EVALUATED LESSONS

Date	Lesson No.	
Nov. 16, 1965	1	Proper and Common Nouns
Nov. 17, "	2	Derivational Suffixes
Nov. 24	3	Facts about Nouns
Nov. 24	4	Acronyms and Blends
Nov. 30	5	Greek and Roman Nouns
Dec. 1	6	Roots of Nouns
Dec. 7	7	General and Specific Nouns
Dec. 8	8	Verb Agreement
Dec. 14	9	Verb Stems
Dec. 15	10	Kinds of Verbs
Dec. 22	11	Recognizing Verbs by Their Forms
Jan. 4, 1966	12	Recognizing Adjectives by Position
Jan. 6	13	Qualifiers
Jan. 12	14	Recognizing Adjectives by Changes in Form
Jan. 13	15	Recognizing Adjectives by Changes
Jan. 18	16	Recognizing Adjectives by Their Meaning
Jan. 19	17	Adverbs
Jan. 25	18	Recognizing Adverbs by Signal Words, Test
Jan. 26	19	Pronouns and Prepositions
Feb. 3	20	Pronouns and Prepositions
Feb. 4	21	Introduction to Kernel Sentences
Feb. 10	22	Kernel Sentences and Kernel Strings
Feb. 11	23	Generating Sentences
Feb. 17	24	Verbal
Feb. 18	25	Modal
Feb. 21	26	Present Participle
Feb. 22	27	Kernel Strings
Feb. 28	28	Past Participle
Mar. 3	29	Adverbial
Mar. 4	30	Review of Formation Rules

APPENDIX B

EFFECTIVENESS INSTRUMENT

Date_____   Lesson_____

                                                        Page   _____

                Rating Scale: 5. Very Effective
                               4. Quite Effective
                               3. Effective
                               2. Not Very Effective
                               1. Not Effective

Teachability

1. Does the lesson have explanations which are readable
    and comprehensive?   5. 4. 3. 2. 1.

2. Does the material in the lesson hold the students'
    attention?   5. 4. 3. 2. 1.

3. Does the lesson fit as closely as possible the readi-
    ness of the students for whom it is intended?   5. 4. 3. 2. 1.

4. Does the lesson make it possible for students to ac-
    quire emotional attitudes and skills of group member-
    ship through oral verbalization?   5. 4. 3. 2. 1.

5. Does the lesson formulate explicit and transferable
    generalizations?   5. 4. 3. 2. 1.

6. Does the lesson provide questions which call for the
    use of generalizations under realistic conditions?   5. 4. 3. 2. 1.

7. Does the lesson provide for practice in application
    either by suggesting activities or posing sensible
    questions?   5. 4. 3. 2. 1.

8. Does the lesson help the students see the intended
    outcome of their work?   5. 4. 3. 2. 1.

9. Does the lesson provide for reinforcements of gram-
    matical concepts previously learned?   5. 4. 3. 2. 1.

10. Does the lesson provide a systematic and logical
    development of the structure of language?   5. 4. 3. 2. 1.

APPENDIX C

OBSERVER'S INSTRUMENT

Students' Names	Facts	Generalizations	Relationships	Applications
1.				
2.				
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29.				

Date _____

APPENDIX D

STUDENTS' INTEREST QUESTIONNAIRE

Structure your comments so that you use the following questions

<u>merely</u> <u>as</u> <u>guides</u>

I. Self-Evaluation

1. Did you feel that you knew grammar well before you took this course?

2. Do you feel you know it better now?

3. Do you feel confident or hesitant about this knowledge?

II. Interest

1. Did you or did you not like the course? Why?

2. Did you like taking it orally or would you have preferred it in the usual way?

3. Do you think you are now more interested in language generally?

III. Appraisal

1. What did you find hard?

2. What did you find easy?

3. What section did you like best?

4. What section did you like least?

5. Have you any suggestions concerning the manuscript?

APPENDIX E

INVESTIGATOR'S RATINGS ON TEACHABILITY OF MANUSCRIPT

Lesson	1	2	3	4	5	6	7	8	9	10
1	5	5	5	4	4	5	5	4	5	5
2	5	5	5	5	5	5	5	4	5	5
3	5	5	5	4	4	4	5	3	3	5
4	5	5	5	5	5	5	5	3	5	5
5	4	5	5	5	4	4	4	4	5	4
6	5	5	5	5	4	5	5	3	3	5
7	4	4	5	4	5	5	4	4	5	5
8	5	4	5	4	5	4	5	5	5	5
9	5	5	5	4	5	5	5	4	5	5
10	5	5	5	4	5	5	5	4	5	5
11	5	5	4	5	5	5	5	5	5	5
12	5	5	5	5	5	5	5	4	5	5
13	5	5	5	5	5	5	4	5	5	5
14	5	5	5	5	5	5	5	3	5	5
15	5	5	5	5	5	5	4	4	5	5
16	5	5	5	5	4	4	5	4	5	5
17	5	5	5	5	5	5	5	4	5	5
18	4	4	5	5	4	5	5	4	5	5
19	5	4	5	4	5	4	5	3	5	5
20	5	5	5	5	5	5	5	4	5	5
21	5	5	5	4	4	5	5	4	5	5
22	5	5	5	3	5	4	4	4	5	5
23	4	4	5	4	5	5	5	4	5	5
24	5	4	4	3	4	4	5	4	5	5
25	5	5	4	4	5	5	4	4	5	5
26	5	4	5	3	5	4	4	3	5	5
27	5	5	4	4	5	5	4	4	5	5
28	5	5	5	4	5	4	5	4	5	5
29	5	5	5	5	5	4	4	3	5	5
30	5	5	5	4	5	5	5	3	5	5

Criteria

APPENDIX F

RAW SCORES ON OBSERVER'S INSTRUMENT

Lesson No.	Fact	Generalization	Relationship	Application	Higher Mental Processes
1	32	6	3	13	22
2	20	2	1	12	15
3	16	6	3	11	20
4	12	5	1	32	38
5	30	5	0	0	5
6	14	15	0	34	49
7	30	7	3	17	27
8	1	1	1	24	26
9	17	10	5	27	42
10	8	9	3	38	50
11	13	2	3	21	26
12	36	8	5	34	47
13	0	6	10	32	48
14	1	4	0	43	47
15	11	0	0	25	25
16	21	4	0	31	35
17	8	2	5	35	42
18	19	1	0	6	7
19	22	4	0	6	10
20	16	5	5	23	33
21	21	2	0	31	33
22	8	1	0	27	28
23	12	2	3	38	43
24	12	3	0	19	22
25	28	3	4	34	41
26	31	3	14	27	44
27	1	5	0	38	43
28	7	1	0	67	68
29	17	0	1	24	25
30	26	1	0	41	42

APPENDIX G

STUDENT RESPONSES

Student Number	Facts	Generalizations	Relationships	Applications	Total
1	10	2	2	10	24
2	4	0	0	7	11
3	10	2	1	13	26
4	8	6	1	14	29
5	8	2	0	13	23
6	1	0	0	2	3
7	4	0	1	17	22
8	1	0	1	9	11
9	5	0	0	10	15
10	5	1	2	12	20
11	7	0	0	10	17
12	5	0	1	10	16
13	6	0	0	10	16
14	5	0	1	12	18
15	3	0	0	12	15
16	7	0	0	23	30
17	1	0	0	7	8
18					
19	4	0	0	10	14
20	2	1	0	8	11
21	6	1	1	13	21
22	11	1	1	20	33
23	7	1	0	20	28
24	0	0	0	8	8
25	7	1	3	11	22
26	13	2	3	29	47
27	6	0	0	9	15
28	9	0	2	14	25
29	8	1	2	14	25

APPENDIX H

STUDENTS' I.Q. SCORES

Student	Laycock I.Q. Scores
1	125
2	90
3	131
4	124
5	102
6	95
7	122
8	120
9	116
10	110
11	123
12	116
13	134
14	89
15	113
16	108
17	103
18	98
19	116
20	99
21	121
22	126
23	120
24	89
25	111
26	140
27	130
28	103
29	98
Total	3272

Mean $\frac{3272}{29} = 112.8$

Range 89 to 140.